CHARACTERISTICS AND PATTERNS OF MIGRATION TO AND FROM MPUMALANGA PROVINCE, 2011 – 2016

By Pinki Lorraine Mulibana

Mini-thesis submitted in partial fulfilment of the requirements for the degree Master of Philosophy in Urban and Regional Science in the Faculty of Arts and Social Sciences at Stellenbosch University

Supervisor: Prof. Manie Geyer

April 2019

DECLARATION

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

ABSTRACT

Migration can be defined as the movement by persons, households or crowds of people from one area to another. The movement can be permanent, temporary, voluntary, involuntary, internal or external. The volumes of migration can result in desirable and undesirable elements at origins and destinations. More diversity amongst areas results in higher levels of migration. Under such conditions, good opportunities arise and attract people who are not satisfied with their places of origin. Rich countries see immigration as an economic challenge, because it increases criminality and causes social tension. However, skilled and highly educated migrants come with information that may help in the development of the country. In South Africa, urbanisation is the cause of increment of population in the urban cities. Recent studies show that counter-urbanisation can be a solution to the rural human capital flight by encouraging development in rural areas and increasing economic opportunities, facilities and crucial skills. This research examines the in and out trends and patterns of migration of Mpumalanga during the period 2011 to 2016. The research shows that Gauteng had the largest percentage (35,3%) of out-migrants to Mpumalanga, followed by Limpopo province with a percentage of 23,6% and KwaZulu-Natal with a percentage of 16,8%. Gauteng also had the highest percentage (57,8%) of in-migrants from Mpumalanga, followed by Limpopo (9,3%), Eastern Cape (8,3%) and KwaZulu-Natal (7,2%). The movement of people to and from Mpumalanga contributes towards the development of Mpumalanga. The rate at which migration takes place in Mpumalanga is posing a big challenge to the province and municipality infrastructures, especially on planning and service delivery. The majority of people from different provinces prefer to relocate to Emalahleni (0,15%), followed by Thembisile (0,13%) and Steve Tshwete (0,13%) municipalities. Few people preferred the Emakhanzeni (0,01%), Mkhondo (0,01%) and Dr Pixley Ka Isaka Seme (0,02%) municipalities. The majority of people from Mpumalanga province are coming from Thembisile municipality (0,22%), followed by Govan Mbeki municipality (0,12%). Socio-economic characteristics such as education and looking for paid work are found to be the main reasons for movement to the current place. This pattern is seen across all provinces. The results give a comprehension of the vicissitudes in migration to and from Mpumalanga, and this can help in planning and strategy.

Keywords and phrases: Migration; Counter-urbanisation; Mpumalanga; Urbanisation; Socio-economic characteristics, Emalahleni municipality.

OPSOMMING

Migrasie kan gedefinieer word as die beweging deur persone, huishoudings of menigte mense van een gebied na 'n ander. Die beweging kan permanent, tydelik, vrywillig, onwillekeurig, intern of ekstern wees. Die volumes van migrasie kan lei tot gewenste en ongewenste elemente by oorsprong en bestemmings. Meer diversiteit tussen gebiede lei tot hoër vlakke van migrasie. Onder sulke omstandighede ontstaan goeie geleenthede en lok mense wat nie tevrede is met hul plekke van herkoms nie. Ryk lande beskou immigrasie as 'n ekonomiese uitdaging omdat dit kriminaliteit verhoog en sosiale spanning veroorsaak. Geskoolde en hoogs opgevoede immigrante kom egter met inligting wat kan help met die ontwikkeling van die land. In Suid-Afrika is verstedeliking die oorsaak van 'n toename van die stedelike bevolking. Onlangse studies toon aan dat teenverstedeliking 'n oplossing vir die landelike menslike kapitaalvlug kan wees deur ontwikkeling in landelike gebiede aan te moedig en ekonomiese geleenthede, fasiliteite en belangrike vaardighede te verhoog. Hierdie studie ondersoek die neigings en patrone van migrasie van en na Mpumalanga gedurende die tydperk 2011 tot 2016. Die navorsing toon dat Gauteng die grootste persentasie (35,3%) van migrante na Mpumalanga gehad het, gevolg deur Limpopo met 'n persentasie van 23,6% en KwaZulu-Natal met 'n persentasie van 16,8%. Gauteng het ook die hoogste persentasie (57,8%) immigrante uit Mpumalanga gehad, gevolg deur Limpopo (9,3%), Oos-Kaap (8,3%) en KwaZulu-Natal (7,2%). Die beweging van mense na en van Mpumalanga dra by tot die ontwikkeling van Mpumalanga. Die tempo waarteen migrasie in Mpumalanga plaasvind, is 'n groot uitdaging vir die provinsie en munisipaliteite se infrastruktuur, veral ten opsigte van beplanning en dienslewering. Die meerderheid mense uit verskillende provinsies verkies om na die munisipale gebiede van Emalahleni (0,15%) en Thembisile (0,13%) te migreer, gevolg deur die Steve Tshwete (0,13%) munisipaliteit. Min mense verkies die Emahkanzeni (0,01%), Mhkhondo (0,01%) en Dr Pixley Ka Isaka Seme (0,02%) munisipaliteite. Die meeste mense uit die Mpumalanga kom uit die Thembisile Munisipaliteit (0,22%), gevolg deur die Govan Mbeki Munisipalitiet met 0,12%). Daar is bevind dat sosio-ekonomiese eienskappe soos onderwys en die soeke na betaalde werk die vernaamste redes vir die beweging na die huidige plek is. Hierdie patroon word in alle provinsies gesien. Die resultate gee 'n begrip van wisselvallighede van migrasie na en van Mpumalanga en dit kan help met beplanning en strategie.

Trefwoorde en frases: Migrasie; Teenverstedeliking; Mpumalanga; Verstedeliking; Sosio-ekonomiese eienskappe, Emalahleni munisipaliteit.

ACKNOWLEDGEMENTS

This thesis is dedicated to my late parents, Mr. William & Mrs. Martha Ramulifho.

I am grateful and wish to express my sincere thanks and acknowledgements to my supervisor, Prof. Manie Geyer for providing guidance and support throughout the study period and my lecturers who taught me a lot. I would also like to thank the following persons: Tebogo More, Annelize Allner and Yvette Regue for their assistance. Special thanks go to my husband: Nthanyiseni, and my children: Thanyani, Thabelo and Mufunwa, for always being there for me, colleagues and friends. I also thank Statistics South Africa for seeing the importance of this research.

CONTENTS

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

CS	Community Survey
SA	South Africa
SADC	Southern African Development Community
Stats SA	Statistics South Africa

1. INTRODUCTION

1.1 Background

Mpumalanga is located in the north-eastern part of the country, bordering Swaziland and Mozambique to the east. It also borders Limpopo, Gauteng, Free State and KwaZulu-Natal within South Africa. It covers an area of 76 495 km² and has a population of 4 335 964, making it the sixth most populous in the country. It is situated mainly on the high plateau grasslands of the Middleveld, which roll eastwards for hundreds of kilometres. In the north-east, it rises towards mountain peaks and terminates in an immense escarpment. In some places, this escarpment plunges hundreds of metres down to the low-lying area known as the Lowveld (Municipalities of South Africa, 2018).

Mpumalanga is considered one of the smallest provinces in South Africa. It has beautiful mountain views, green valleys, subtropical plantations, a cool climate, and natural assets such as waterfalls, caves and parks (Lonely planet, 2018). These attract tourists.

The main economic sector that drives Mpumalanga province is mining, especially coal, which is supplied to the Eskom power plants. It attracts tourists because of the parks, recreational facilities, resorts and caves (hotelprolet, 2017).

Figure 1 shows the South African provincial boundaries with Mpumalanga province highlighted in red.

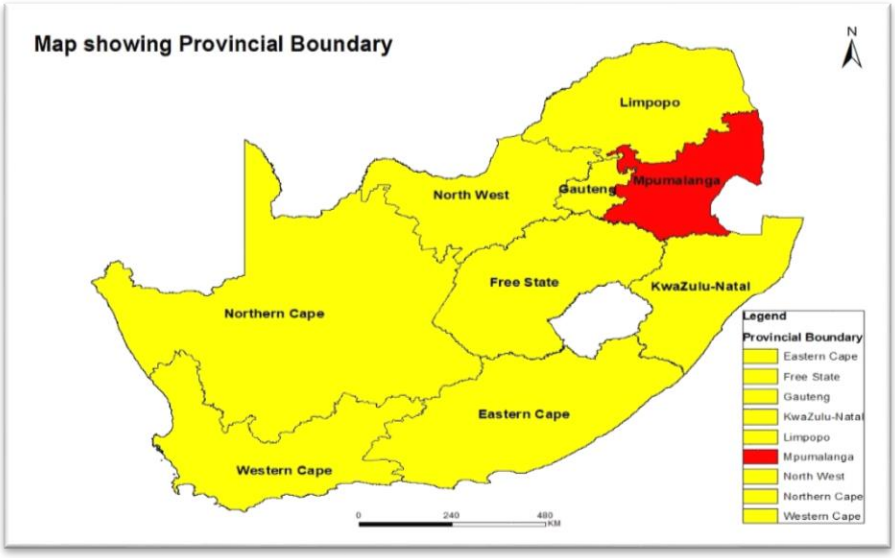

Figure 1: South Africa's provincial boundaries

Mpumalanga comprises the following districts: Ehlanzeni District Municipality in Mbombela (previously Nelspruit), Gert Sibande District Municipality in Ermelo and Nkangala District Municipality in Middelburg (Salga, 2018).

The map below shows the districts of Mpumalanga province.

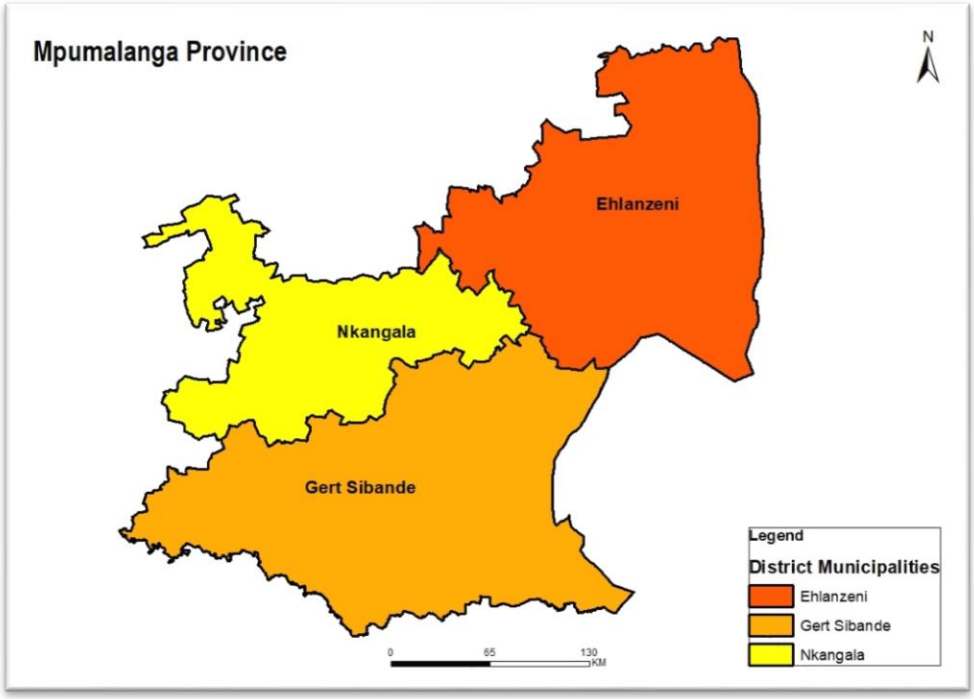

Figure 2: The districts of Mpumalanga province

Human migration is the movement of individuals from one area to another. When an enormous number of people move, historians have questions concerning people's movement and the consequences of their movements (Khanacademy, 2018). International migration is when people move from one country to another, whereas internal migration is the movement from one area to another within the same country (BBC, 2014).

There are many situations in which people can decide of their own free will whether to move or not, but in some circumstances they are forced to move by disasters such as droughts, hurricanes, flooding, earthquakes, diseases, war and conflict. Migration can be permanent, temporary or circular.

Migration is determined by the powers that pull migrants to where they want to go (called the pull factor) and by the powers that push them to move away from their place (called the push factor) (Bruecker et al., 2014).

Push factors such as lack of good education, pollution, poverty, unemployment, and lack of service or amenities contribute to out-migration from Mpumalanga.

Pull factors such as tourism, employment, potential for unskilled labour in the mines, and fertile land contribute to in-migration to Mpumalanga.

It is significant for policymakers to know the population status and the causes of population growth of Mpumalanga so that proper planning can be done. Migration is one cause of population growth or population decay.

1.2 Problem statement

As part of the research into migration trends and patterns of Mpumalanga province, the study investigates the spatial patterns of in- and out-migration to and from Mpumalanga province. The study further investigates the socio-economic factors that contribute to the in- and out-migration to and from Mpumalanga province.

1.3 Research questions

- What are the physiognomies of migration in Mpumalanga between 2011 and 2016?
- What are the origins and destinations of migrants to and from Mpumalanga?
- What are the dominant socio-economic characteristics of migrants to and from Mpumalanga between 2011 and 2016?

1.4 Aim

The aim of the study is to analyse the physiognomies of migration patterns and trends of migration to and from Mpumalanga, and the factors contributing to Mpumalanga's migration trends over a 5-year period from 2011 to 2016.

1.5 Objectives

- To determine the in- and out-migration trends and patterns of Mpumalanga at provincial and municipal levels;
- To identify the areas that people migrate to in Mpumalanga at municipal level;

- To identify the areas that people in Mpumalanga migrate from;
- To analyse the socio-economic characteristics of migrants to and from Mpumalanga; and
- To interpret migration trends and patterns within the theoretical framework of Ravenstein's laws of migration in order to understand factors contributing to in- and out-migration in Mpumalanga.

1.6 Hypothesis

Women are expected to migrate over shorter distances than men do. Most migrations will be over a shorter distance. People with better skills migrate to urban areas. The majority of people migrated from Mpumalanga because of employment and better education; and reasons for those migrating to Mpumalanga were a demand for unskilled labour at the mines and for agriculture. Employment and education are the main factors contributing to out-migration in Mpumalanga.

This paper is organised into four units. Chapter 2 outlines the pertinent theories of migration, migration and urbanisation, factors causing migration, significance of migration, and ways to manage migration. Chapter 3 defines the data sources and methodology used in the research. Chapter 4 illustrates the results of the study. It focuses on patterns and trends of migration to and from Mpumalanga, and the socio-economic characteristics of migrants to and from Mpumalanga. The conclusion and recommendations are based on the results of the study, and are outlined in Chapter 5.

2. LITERATURE REVIEW

2.1 Migration theory

Migration is defined as the movement by individuals, households or a crowd of people from one area to another. The movement can be permanent, temporary, voluntary, involuntary, internal or external (Lee, 1966). Migration can be seasonal, circular, short term, or long term (Pacione, 2007). Families can migrate as a unit because the economic decisions for or against migration are based on net family gains. That is to say, if one of the family members experiences some form of personal socio-economic loss, this could result in a chain migration in which the initial migration of individuals results in the subsequent migration of members of families, relatives and friends (Mincer, 1978).

Ernest Ravenstein (1889) is the first migration theorist who came up with migration laws. He argued that migration was caused by push and pull factors. Bad circumstances in one's location (poverty, oppressive laws, fear, unemployment, heavy taxation and disasters) push people out, and good environments (safety, opportunities, stability, freedom, etc.) pull them out into another place. Ravenstein's laws are stated below:

- The main motivation for migration is enhanced economic conditions;
- Most migration is over short distances;
- Migration rates decrease proportional to distance;
- Long-distance migrants tend to settle in large city centres;
- Migration follows a certain trend – most migration is from rural to urban areas;
- Every migration moves in the opposite direction;
- Females migrants would be more prone to migrate over short distances than men would, while males would tend to migrate over long distances more than females would;
- Adults migrate more than youth;
- Cities are growing because of migration, not because of a natural increase;
- The development of industries and the improvement in means of transportation increase migration.

Many theories were developed after Ravenstein's theory, and most of them were more or less different in agreement with his conclusions. Lee (1966) argued that migration is limited by intervening hindrances. These include restrictive immigration laws, employment

opportunities, migration costs, religious, cultural and political barriers, and the local environment. Demographics such as gender, age and race determine how people react to push and pull factors, and these factors help them to conquer the hindrances that they are facing. There are factors such as a person's education, family ties and information about the area of destination, which can make migration easy or difficult to take place (Lee, 1966).

The first modified theory of push and pull factors in order to deal with patterns of migration is the neoclassical economic theory (Todaro 1969), which proposes that migration is based on labour market mechanisms, rational economic decisions, utility maximisation and factor-price differentials. Labour migration is produced through the topographical changes in the supply and demand for labour; countries with excess labour will have lower wages while countries with excess capital will have higher wages. The macro-level neoclassical model argues that the most proficient people – young singles – are more likely to migrate, and that in-migration results in falling wages and increased living costs from one's area, while the impact of outmigration is the opposite (Todaro 1969; Harris & Todaro, 1970; Todaro, 1976).

The second theory is the segmented labour-market theory (Piore, 1979), which argues that international labour migration is caused by pull, not push factors, primarily cheap, flexible, temporary labour in developed countries. This creates a dual or segmented labour market: a primary labour market of safe, good paying jobs for natives and a secondary labour market of those with a low level of education and little experience, and basically, temporary and unpleasant jobs for migrants. Increasing migration enables employers to lower wages even more. Furthermore, the low status of migrant workers undermines their chances of upward mobility.

The third theory is the world systems theory (Sassen, 1988), which argues that international migration is caused by universal capitalism. International industries use historical links such as transportation, communication infrastructures, and administrative and cultural links to empower production in less developed countries, which end up becoming urbanised.

Chicagoists used Newtonian physics (gravity) to explain migration. Where the population of two locations becomes high, there will be more movement between the two locations (Findlayson et al., 1988). This also applies to relative economic output in the locations. Migration rates increase where the economic growth and employment rates of two locations

increase (Jerome, 1926); therefore, distance becomes a good factor for migration costs (Zipf, 1946).

There are counter-urbanisation (urban to rural) migrations, which focus on tourism and recreation destinations, and mining destinations (Geyer & Geyer, 2017). They are called environmentalist and productionist migrations that are used to determine the changing relationships between settlements and patterns of migration (Geyer and Kontuly, 1993; Geyer, 1996). The number of people who are migrating to small cities for environmental reasons in South Africa is increasing (Geyer and Kontuly, 1993) because there are economic opportunities for less educated people. Mainstream counter-urbanisation has not yet happened in South Africa, but indications of substream counter-urbanisation are seen by the growth of some picturesque cities and coastal towns in the deeper edge (Geyer & Geyer, 2017). In South Africa (Geyer, 2016), apartheid contributed towards population migration patterns due to income and ethnic migration differentials.

2.2 Migration and urbanisation

The United Nations Habitat (2006) described urbanisation as an increased number of individuals in urban areas rather than in rural areas. This is characterised by an increase in the urban proportion of the total number of people and their activities, such as economic, social and cultural activities (Ledent, 1982). In South Africa, urbanisation is the main cause of the population increment in the urban cities (Geyer et al., 2012).

Urbanisation-migration happens because of the difference between urban and rural areas, and because of the expected salary rather than actual earnings. Migrants look at different job opportunities in both urban and rural sectors and select the one that can give them the maximum predicted gains (Harris and Todaro, 1970).

Migration from rural to urban areas is the main form of urbanisation. Employment and earnings are the key factor behind migration, whereas social networks help people to move from poor areas to rich areas (Wagner and Ward, 1980; Hiday, 1978; Skeldon, 1977). People move from rural areas to urban areas because there is no development in rural areas, and except for the involuntary movement by refugees, many people move for economic reasons (Pacione, 2009).

The South African urban system is changing from being completely urbanised – where people move to big cities only – to a system where more and more people move to intermediate-sized cities, which is leading to polarisation reversal (Geyer, 1996; Richardson, 1980; Kontuly and Geyer, 2003; Geyer and Geyer, 2014; 2015). The industrialisation and commercialisation of agriculture contribute to the pattern of migration, with more rural people attracted to urban areas (Pacione, 2009). Zelinsky (1971) argued that the type of migration that happens in a state rests on how developed it is or what kind of society it is. Out-migration in rural areas is caused by high rates of population growth. Nonetheless, population growth alone is not the main cause of out-migration. The effects of demographic pressure together with failure of other processes to accommodate sufficiently the needs of a growing rural population are perceived as the main cause of out-migration. One of the pressing issues facing the country today is access to land. The biggest challenge that is caused by urbanisation is the population brain drain from smaller areas to larger cities (Lipton, 1976; Todaro, 1982). This is often found in developing countries (Henderson, 2002).

In South Africa, the trend in migration is changing from mainly urbanisation, i.e. where more people are migrating to large cities than intermediate-sized cities towards polarisation reversal, where the rate of migration to primate cities is overtaken by the rates of migration to intermediate or middle-tier cities (Geyer 2016, 2014, 2002, 2006).The theories behind environmentalism and productionism (Hart, 1983) were viewed as important economic motivations for deconcentration movements and urbanisation (Geyer and Kontuly, 1993; Geyer et al., 2012).

2.3 Factors influencing migration

The historical structural perspective argued that the reasons for migration differ between countries. Factors causing people to migrate differ from one person to the other; what causes one to migrate may not be the cause for the other one to migrate (Lee, 1966).

Lee (1966) argued that even if migration is caused by push and pull forces (Ravenstein, 1889), people react differently to push and pull factors due to differences in income, culture, ideology and life-stages, and migration is caused by social factors including poor economic conditions, religious or political persecution and adverse environmental conditions.

Piore (1979) argues that migration is motivated by pull, not push factors, primarily cheap, flexible, temporary labour in developed countries. Increasing migration enables employers to

lower wages even more. Furthermore, the low status of migrant workers undermines their chances of upward mobility. However, the migrant has a higher status in their country of origin as a foreign worker. Thus, migration spawns a dependency, perpetuating a segregated labour market.

Stouffer (1940) argued that migration is motivated by social opportunities (social contacts, employment possibilities, living quality, social freedoms, etc.) at the destination, and lack of opportunities at the point of origin. Thus, social distance, not physical distance is an important factor in migration. According to Harris & Todaro (1970), migration is also encouraged by better services, better education and better housing in urban areas.

The new economics of migration theory (Stark and Bloom, 1985) argues that people migrate as a family because they do not only migrate to increase their revenue but they also look at ways to minimise their migration risks (Stark, 1991). Migrants weigh the benefits and costs of migration before migrating, which include income, living quality, social standing, and connections with friends and family. Thus, ethnicity is of great importance in migration (Mincer, 1978).

The migration network theory is based on the observation that migrants tend to migrate to areas where there are family and friends from the same kinship group already in the host location. There they form diaspora networks (Taylor, 1986). Contacts from these networks improve the efficiency of migration by providing important information spillovers that are needed to make rational economic choices, and to minimise relocation costs. Kinship networks also help secure jobs, house communities, reduce the cultural shock of migration, and reduce vulnerability to exploitation (Massey, 1990). These migrant institutions enable the continuation of migration even when the economic incentives no longer exist (Hugo, 1981; Gurak and Caces, 1992).

The classical economics models of the 1960s view migration as a reaction by persons to determine the variances of employment prospects and income rates. Migration was seen as a way to remove such differentials by matching labour supply and demand, and thereby contributing to national economic development. A second, neo-classical economic theory also defines migration as a way in which people make a rational economic choice based on the current or future benefits of a move (Pacione, 2007).

The decision for one to move from one place to another as enunciated by the theory of place utility depends on the services available in the present area compared to the alternative area (Brown and Moore, 1970). When utility in the current location is less than that of the alternative locations by an enormous threshold, people move. The main reason to move according to the utility theory is the labour market circumstances. People relocate to areas where there are high earnings and high employment from areas where there are low wages and low employment (Lowry, 1966). Capital constraints limit the choice of place where people can go (DaVanzo, 1981).

2.4 Significances of migration

The volumes of migration can result in positive and negative factors at origins and destinations. The degree of diversity has an impact on the levels of migration. Under such conditions, good opportunities arise and attract people who are not satisfied with their place of origin (Lee, 1966).

The movement of people from one area to another is important for information sharing, economic development, innovation, trade, and investments. The information is important for the new economic scenery of the world. However, there is a fast growing population of non-native people and the large number of migrants, which is causing intense discussions in many industrialised countries concerning the effect of immigrants and the successive social and economic shocks in the receiving countries. Migrant-sending countries are very worried about losing their highly skilled people and innovators (Nijkamp et al., 2012).

There has long been an extensive recognition that economic and population dispersion to peripheral zones benefits the country's national welfare (Hirschman, 1958; Myrdal, 1957; Richardson, 1973). Zolberg (2006) argues that migration can boost declining population growth. However, the benefits of migration are concentrated amongst the economic elite of countries of origin, resulting in declining economic growth in the blue-collar class due to lower wages. Moreover, immigration and multiculturalism has a negative effect on the sovereignty, identities and privileges of the native population.

Many developing countries are facing political instability and this in turn is increasing the number of migrants in the receiving countries. It is well recorded that receiving countries experience various forms of migration such as economic migrants, temporary and permanent resettles, asylum seekers, students and many more. The outcomes of these have created

challenges for policymakers in destination countries in terms of developing a balanced migration policy. This in turn fuelled heated political debates across the world on the adequacy of migrants. Some policymakers in receiving developed countries consider immigration as an economic burden and ignore the positive spin-offs.

The new economic geography theories argue that areas with features such as low trade barriers and high technology industries may cause a concentration of industries which may attract both capital and labour flows. Agglomeration causes brain drain from underdeveloped countries to developed countries. This will benefit the hosting countries because they will gain more knowledge-intensive skills, which will boost the economy of the country and employment growth (Carrington, 2013). Skilled migrants (Kugler et al., 2017; Lucas, 1990) have a positive impact on international bank lending, trade and foreign direct investment (FDI) (Aubry et al., 2016).

2.5 Ways to manage migration crises

According to the Neoclassical Macro Theory, migration of workers is caused by the variances in wages across regions. Labour markets are the main thing in which migration of labour is persuading; other markets do not have a significant role in migration. The method in which governments must control migration streams is to regulate or influence labour markets (Lewis, 1954; Ranis & Fei, 1961).

There must be security in the borders because there are some radical flows into migrant and immigrant streams, as it is happening in Europe. Biometrics, cybersphere and militaries must be used to control the security dimension (Stavridis, 2016). Migrants must not have access to welfare benefits (Martin, 2013), and illegal migrants must be taken back home as soon as they enter the country.

There must be centres that process migrants before they enter the country so that protection can be given to those who qualify for refugee protection. The economic migrants can also be identified, and illegal migrants may be sent back home and others may join their families who are already in the country (UNDP, 2009).

A current study (Geyer and Geyer, 2017) recommends that counter-urbanisation can be used as a counterbalance for the rural brain drain, encouraging peripheral growth, by increasing rural access to economic opportunities, skills and services (Bosworth, 2006, 2010; Bosworth

and Atterton, 2012). This will assist policymakers and spatial investors to take valid decisions in such peripheral regions (Geyer and Geyer, 2017). Counter-urbanisation may result in numerous beneficial effects such as housing stock shortages, overstraining public services and poor and debarment development (Loffler and Steinicke, 2006; Spencer, 1995).

3. METHODOLOGY AND DATA SOURCES

3.1 Data sources

Secondary data will be used to analyse migration in Mpumalanga province. The data from Census 2011 and the 2016 Community Survey supplied by Statistics South Africa (Stats SA) will be used for the analysis. The two surveys are used in this study because they have migration variables that are comparable.

A census is the counting of all people in a country with the aim of generating their social and economic information for policy formulation (Statistics South Africa, 2012). Census 2011 was conducted from 9 to 31 October 2011, and every household was visited (Statistics South Africa, 2012).

The South African Community Survey (CS) of 2016 was a large-scale survey that was undertaken between Census 2011 and the next census that is planned for 2021. CS provides population and household statistics at municipal level to the private sector and government for planning and administration (Statistics South Africa, 2017). Stats SA visited a sample of 1,3 million households across the country during CS 2016, which was conducted from 7 March to 22 April 2016 (Statistics South Africa, 2017).

3.2 Methodology

Descriptive statistics will be used to analyse the migration trends and characteristics of the provinces from where in-migrants to Mpumalanga come, and the provinces to where out-migrants from Mpumalanga move. Descriptive statistics will also be drawn within the Mpumalanga municipalities, i.e. the movement within the province (from one municipality to the other). Descriptive statistics give a brief numerical or quantitative summary of characteristics of the variables and datasets (Chapman J, 2009: 14). Descriptive statistics will be used to display graphs, tables and a summary of migration movements and characteristics for migrants to and from Mpumalanga. The variables that will be used for the analysis are province of previous residence, province of usual residence, municipality of previous residence, municipality of usual residence, country of birth, age, level of education, employment, agricultural activities, sex, income category and population group.

The description of variables and their importance are defined in Table 3.1.

Table 3.1: Description of variables used in the analysis of migration

Variable	Description
Province of previous residence	This variable will be used to determine the provincial spatial patterns of in-migration to Mpumalanga.
Province of usual residence	This variable will be used to determine the provincial spatial patterns of out-migration from Mpumalanga.
Municipality of previous residence	This variable will be used to determine more specific spatial patterns of in-migration to Mpumalanga.
Municipality of usual residence	This variable will be used to determine more specific spatial patterns of out-migration from Mpumalanga.
Country of birth	This variable will be used to determine the number of international migrants participating in migration to Mpumalanga.
Age	This variable will be used to determine the size of cohorts migrating in to and out of Mpumalanga.
Level of education	This variable is used to determine the proportions of people in different educational categories migrating in to and out of Mpumalanga
Employment	This variable is used to determine the proportion of different employment categories migrating in to or out of Mpumalanga.
Agricultural activities	This variable is used to determine the proportion of migrants in agriculture in Mpumalanga.
Sex	This variable is used to determine gender proportions in migration in Mpumalanga. This will also help in the interpretation of one of Ravenstein's migration laws, i.e. that females tend to migrate more than males over shorter distances, while males migrate more over longer distances.
Income category	Gross income determines the income levels of different proportions of migrants to or from Mpumalanga.
Population group	This variable determines the race of different proportions of migrants to or from Mpumalanga.

The basic units of analysis will be Province of previous residence, Province of usual residence, Municipality of previous residence, Municipality of usual residence and Country of birth. The contingency table will be used to determine the interrelationship and interaction between the variables. The contingency table will be done between be Province of previous residence, Province of usual residence, Municipality of previous residence, Municipality of usual residence, Country of birth and the other variables stated above.

Analysis using only descriptive statistics is not enough since descriptive statistics cannot sufficiently display the spatial patterns of migration; hence, a spatial analysis will also be done to identify the spatial patterns and trends of migration in Mpumalanga.

The inferential spatial statistics systems will be used to measure the concentration of clusters of migration in Mpumalanga; and the mapping cluster tools will be used to identify the locations of statistically significant hot spots, cold spots, spatial outliers, and similar features.

The spatial pattern analysis and mapping cluster tools for inferential spatial statistics which are used are High/low clustering (Getis-Ord General G) (Global Statistic), a spatial analysis tool and Hot-spot analysis (Getis-Ord Gi*) (Local statistic), a cluster mapping tool.

- High/low clustering (Getis-Ord General G) (Global Statistic) is used to measure concentrations of migrant groups to and from Mpumalanga province. It will be used to make statistical inferences of migration patterns to and from Mpumalanga province at provincial level.
- Hot-spot analysis (Getis-Ord Gi*) (Local statistic) will be used to assess whether high or low values (patterns of migrants in Mpumalanga) cluster spatially. This technique will be used to determine the areas in a municipality where high and low values of in- and out-migrants are clustered.

The Statistical Package for the Social Sciences (SPSS) and Statistical Analysis System (SAS) will be used to analyse the descriptive statistics. Maps and analysis of the spatial features and trends for in- and out-migration data will be done by using GIS Software.

3.3 Motivation for the study

Mpumalanga province is situated in the eastern part of South Africa. It shares borders with Swaziland and Mozambique. In South Africa, Mpumalanga shares its borders with the provinces of Gauteng, Limpopo, KwaZulu-Natal and Free State. The location of the province makes it easily accessible to many people from the surrounding provinces.

There are many work and business opportunities in Mpumalanga, since the area is rich in minerals such as coal, gold, platinum, chromite, zinc, cobalt, copper, iron and manganese. South Africa sources more coal from Mpumalanga than from any other province; hence, some of the biggest power stations have been built there. Policy on local procurement,

especially in the mining sector, has also led potential entrepreneurs and established business people to move to places such as Witbank and Middelburg in Mpumalanga.

The unemployment rate in South Africa has been growing, and it is for this reason that some of the unemployed active people would move to seek greener pastures in Mpumalanga. It provides job opportunities in the manufacturing, agriculture and mining sectors. Agriculture plays a very significant role in the economy of the province.

Mpumalanga province has high levels of air pollution, which affects people's health and consequently results in some people relocating to other provinces. The province also has water pollution, which is caused by mining, and this is a serious threat to the agricultural production sector (food security).

Other industries are not available in Mpumalanga, which pushes people away from the province. These are industries such as the financial industries, and the lack of these industries and the accompanying economic factors such as employment and education, cause people to seek employment elsewhere.

It is therefore important to determine the number of people who move in and out of Mpumalanga for policy decision-making.

4. RESULTS OF ANALYSIS

4.1 Introduction

The results are provided in three units. Unit 4.2 gives an analysis of the spatial patterns of migration to and from Mpumalanga. It gives an outline analysis of areas of origin for in-migrants and out-migrants at a provincial level and a detailed spatial analysis at municipal level. It describes the spatial patterns of the receiving areas of the in- and out-migrants at municipal level. It also gives the cluster-outlier analysis of Mpumalanga areas in order to identify the hot- and cold-spot areas.

Section 4.3 gives an analysis of the socio-economic characteristics of in- and out-migrants of Mpumalanga, and this includes demographics such as age, gender, employment status, income and level of education. The results of the variables are presented as follows: The total overall summary, disaggregation for the province and spatial analysis for the municipality of origin.

4.2 Main senders to and recipients of migrants in Mpumalanga

4.2.1 Main senders of in-migrants to Mpumalanga

Table 4.1 shows the distribution of main senders of migrants to Mpumalanga, according to Census 2011 and CS 2016. In 2011, Gauteng had the highest percentage (44,8%) of in-migrants to Mpumalanga, followed by Limpopo with 17,2% and KwaZulu-Natal with 13,7%. The other provinces had less than 8% of in-migrants to Mpumalanga. In 2016, the highest percentage (35,3%) of in-migrants to Mpumalanga came from Gauteng, followed by Limpopo (23,6%) and KwaZulu-Natal (16,8%). Both Census 2011 and CS 2016 portray similar results.

Table 4.1: Distribution of in-migrants to Mpumalanga

Province	In-migrants (%)	
	2011	2016
Western Cape	4,7	2,6
Eastern Cape	5,5	8,8
Northern Cape	2,5	2,0
Free State	4,5	5,8
KwaZulu-Natal	13,7	16,8
North West	7,1	5,1
Gauteng	44,8	35,3
Limpopo	17,2	23,6
Total	**100,0**	**100,0**

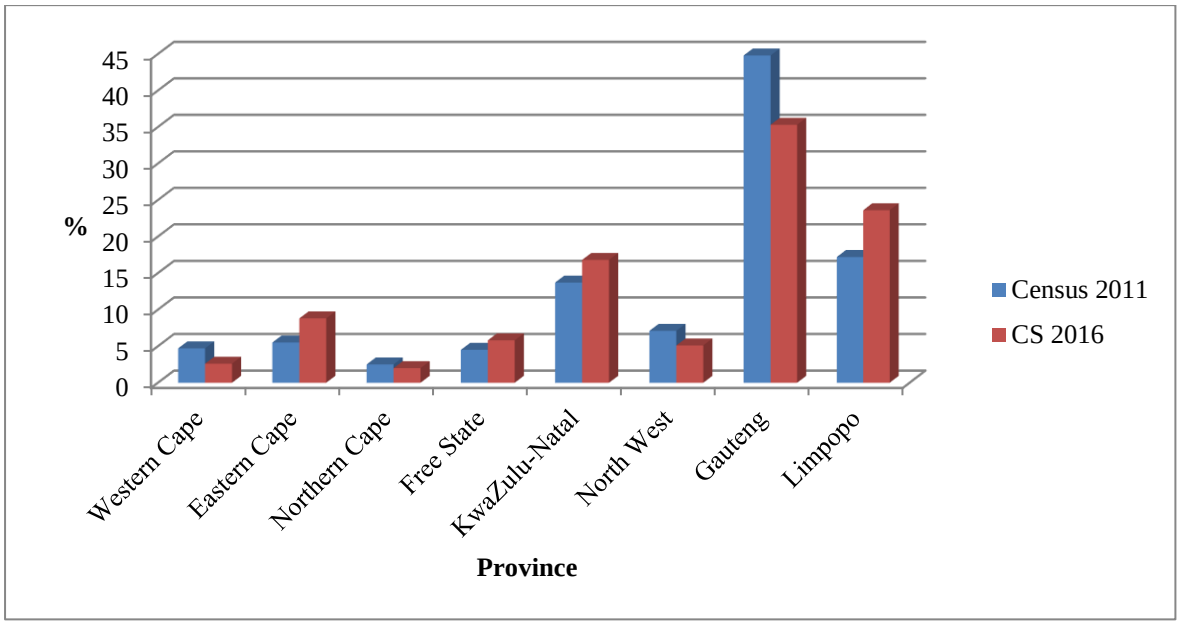

Figure 3: Bar chart showing in-migrants to Mpumalanga

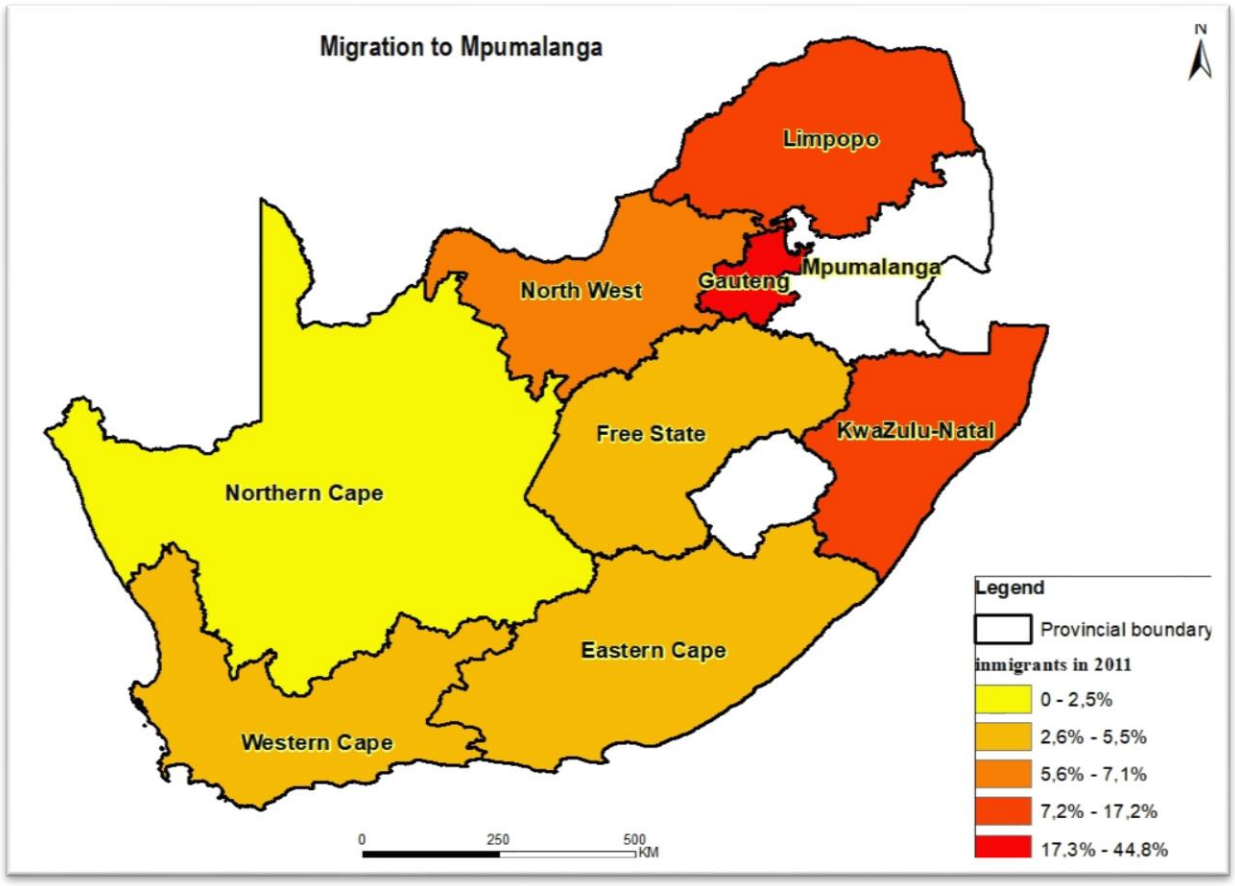

Figure 4: In-migrants to Mpumalanga

Table 4.2 shows the main receiver district municipalities of migrants to Mpumalanga between Census 2011 and CS 2016. Gauteng recorded the highest percentage of people sent to Mpumalanga district municipalities, followed by Limpopo and KwaZulu-Natal in both 2011 and 2016. The main receiver district municipality is Gert Sibande, followed by Ehlanzeni, and the least significant receiver is Nkangala. The majority of people coming from Eastern Cape and KwaZulu-Natal are located at Gert Sibande, and the majority of the in-migrants coming from Gauteng and Limpopo have settled in Nkangala and Ehlanzeni.

Table 4.2: Distribution of in migrants to the three Mpumalanga district municipalities

	District municipality					
	Gert Sibande		**Nkangala**		**Ehlanzeni**	
Province	**2011**	**2016**	**2011**	**2016**	**2011**	**2016**
Western Cape	3,1	1,9	1,7	1,1	3,9	0,3
Eastern Cape	10,9	6,9	8,9	6,1	6,7	5,4
Northern Cape	1,8	1,1	1,7	1,1	2,6	1,0
Free State	11,3	6,6	3,8	3,5	4,0	1,9
KwaZulu-Natal	28,7	29,5	12,7	11,9	12,1	8,2
North West	4,9	3,0	4,8	4,2	6,5	6,9
Gauteng	29,5	42,5	36,7	43,9	37,3	43,8
Limpopo	9,9	8,6	29,7	28,1	27,0	32,5
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

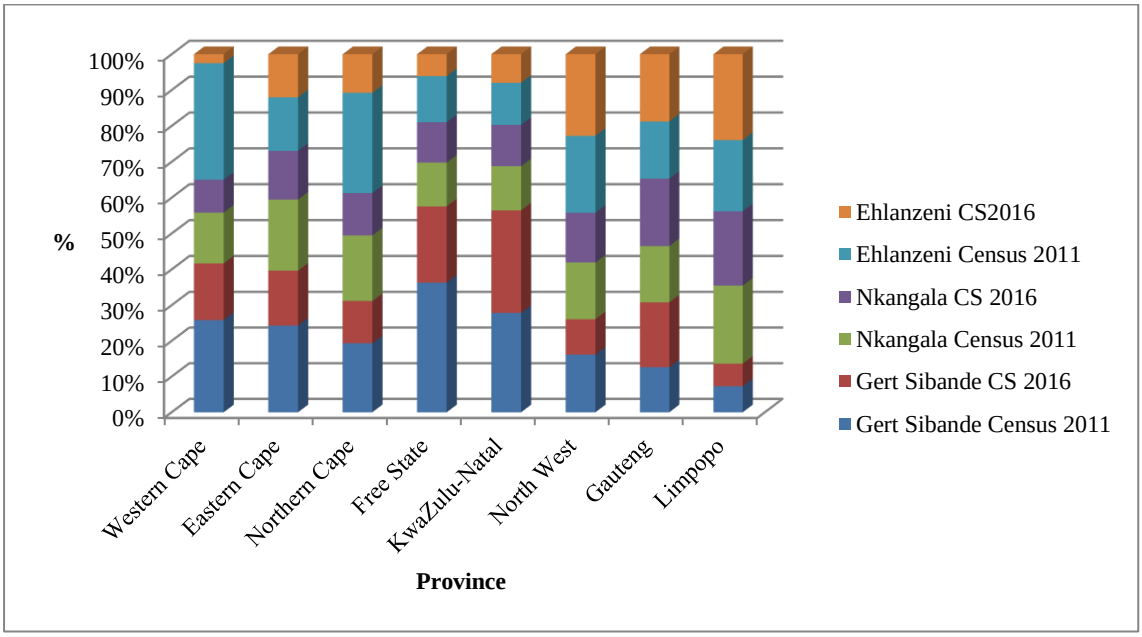

Figure 5: Main receiver district municipalities of in-migrants to Mpumalanga

Spatial analysis of migration patterns at municipal level is shown in Table 4.3 and Figure 6. Table 4.3 shows the distribution of main receiver municipalities of migrants to Mpumalanga between 2011 and 2016. In order of numbers, the majority of people from different provinces preferred to relocate to Emalahleni (15,0%); Thembisile (13,0%) and Steve Tshwete (13,0%). The local municipalities attracting the smallest number of were Emakhanzeni (1,0%), Mkhondo (1,0%) and Dr Pixley Ka Isaka Seme (2,0%) municipalities.

Table 4.3: Distribution of main receiver municipalities of in-migrants to Mpumalanga

	Province								
Local municipality	**Western Cape**	**Eastern Cape**	**Northern Cape**	**Free State**	**KwaZulu-Natal**	**North West**	**Gauteng**	**Limpopo**	**Total**
Chief Albert Luthuli	2,5	2,8	0,0	2,2	5,5	1,3	4,0	1,0	**3,0**
Msukaligwa	12,5	2,8	5,3	1,4	9,7	3,3	5,5	2,7	**5,0**
Mkhondo	2,5	0,0	0,0	0,0	5,5	0,0	1,2	0,4	**1,0**
Dr Pixley Ka Isaka Seme	2,5	0,0	2,6	0,7	3,8	0,7	1,7	0,5	**2,0**
Lekwa	2,5	4,7	5,3	16,5	8,4	0,0	3,0	0,7	**4,0**
Dipaleseng	2,5	3,3	7,9	5,0	4,4	9,2	5,4	1,0	**4,0**
Govan Mbeki	17,5	15,9	5,3	17,3	12,0	3,3	5,0	3,4	**7,0**
Victor Khanye	7,5	4,2	5,3	4,3	4,6	6,5	5,2	3,0	**5,0**
Emalahleni	2,5	27,6	5,3	12,9	16,4	11,1	10,9	21,1	**15,0**
Steve Tshwete	32,5	14,5	23,7	24,5	14,0	10,5	9,7	13,1	**13,0**
Emakhazeni	0,0	0,9	0,0	0,7	0,7	0,7	1,4	0,8	**1,0**
Thembisile	5,0	3,7	2,6	2,9	3,6	13,1	19,1	12,2	**13,0**
Dr JS Moroka	5,0	1,9	18,4	2,2	1,1	9,2	7,9	12,8	**8,0**
Thaba Chweu	0,0	1,4	7,9	0,0	2,7	11,8	3,2	12,9	**6,0**
Bushbuckridge	0,0	3,3	0,0	2,2	0,7	6,5	3,8	5,2	**4,0**
Nkomazi	5,0	3,3	0,0	3,6	2,0	3,3	5,0	1,6	**3,0**
City of Mbombela	0,0	9,8	10,5	3,6	4,9	9,8	8,2	7,7	**7,0**
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

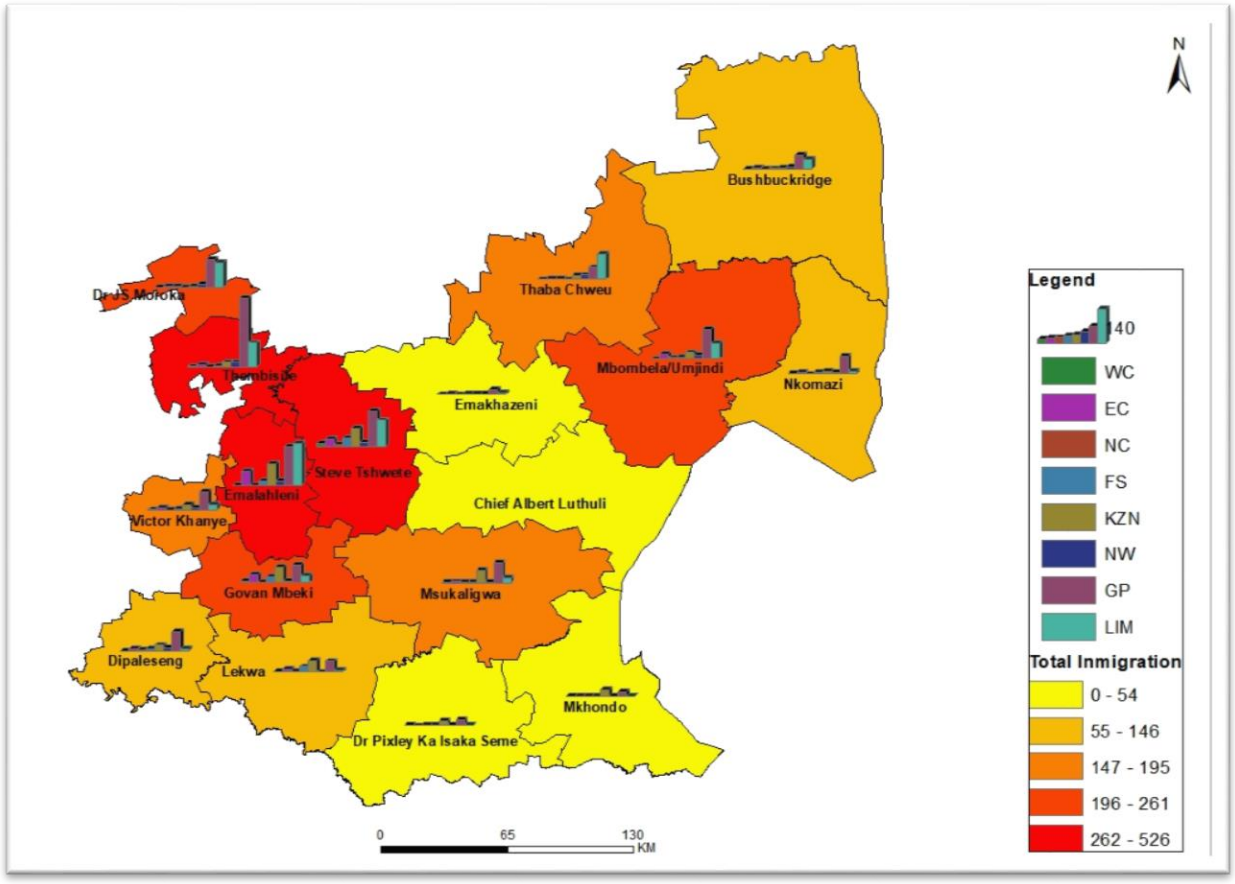

Figure 6: Main receiver municipalities of in-migrants to Mpumalanga

4.2.2 Recipients of out-migrants from Mpumalanga

Table 4.4 shows the movement of people from Mpumalanga to other areas in 2011 and 2016. People who were born in Mpumalanga were spread across the different provinces of South Africa in 2011. Gauteng received the highest percentage (57,8%) of in-migrants; 9,3% moved to Limpopo; 8,3% moved to Eastern Cape; and 7,2% settled in KwaZulu-Natal. The remaining provinces received less than 7,0% of migrants from Mpumalanga. People born in Mpumalanga in 2016 were spread across the different provinces of South Africa in the following manner: 43,9% resided in Gauteng; 23,8% in Limpopo; and 15,7% in KwaZulu-Natal. Less than 7,0% of these people born in Mpumalanga were found in any of the remaining provinces.

Table 4.4: Distribution of main receiver provinces of out-migrants from Mpumalanga

Province of birth	Out-migrants (%)	
	2011	2016
Western Cape	6,8	1,2
Eastern Cape	8,3	6,1
Northern Cape	1,9	1,2
Free State	3,0	3,8
KwaZulu-Natal	7,2	15,7
North West	5,6	4,3
Gauteng	57,8	43,9
Limpopo	9,3	23.8
Total	**100,0**	**100,0**

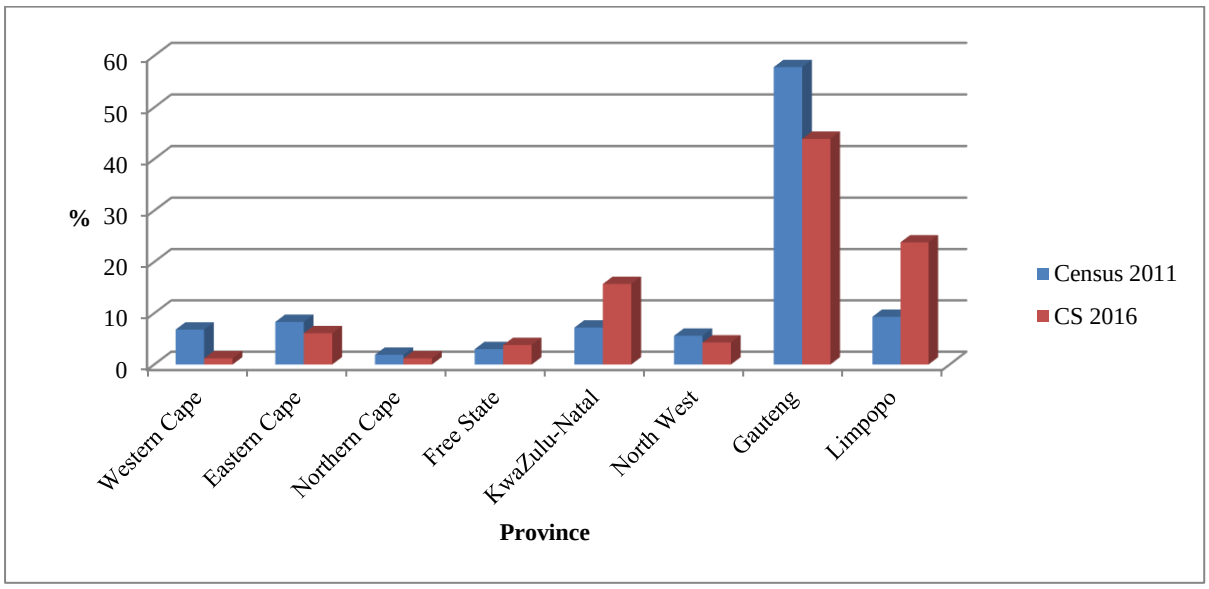

Figure 7: Main senders of out-migrants from Mpumalanga

Figure 7 and Figure 8 below show the visual distribution of main senders of migrants from Mpumalanga.

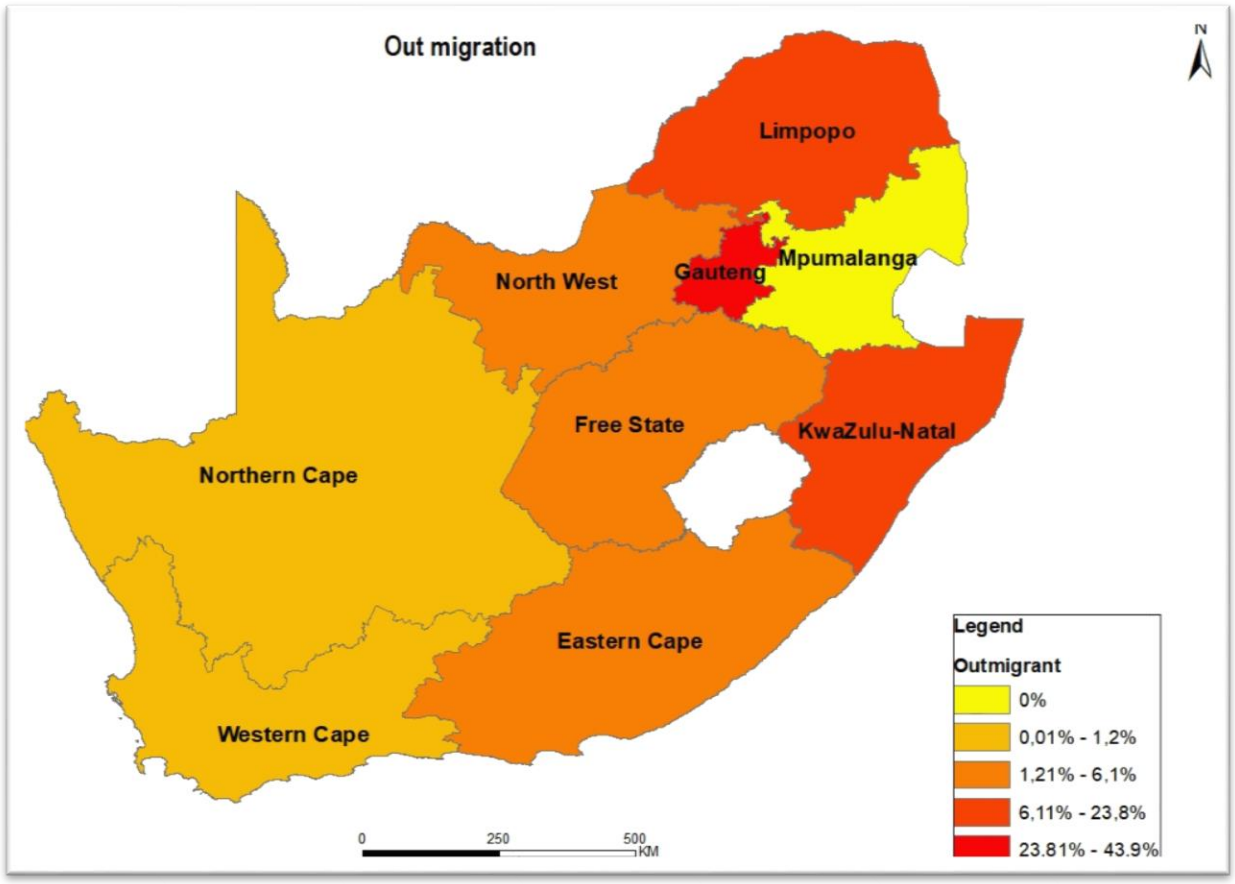

Figure 8: Main sender municipalities of out-migrants from Mpumalanga

Table 4.5 shows the percentage of main sender municipalities of migrants from Mpumalanga between Census 2011 and CS 2016. The majority of people came from Thembisile Municipality (22%), followed by Govan Mbeki (12%). Only a few migrants came from Emakhazeni (0,0%), Thaba Chweu (1%) and Dr Pixley Ka Isaka Seme (1%).

Table 4.5: Distribution of main sender municipalities of out-migrants from Mpumalanga

Municipality	Province								
	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Limpopo	Total
Chief Albert Luthuli	20,0	4,5	0,0	7,7	9,3	0,0	6,3	7,3	7,0
Msukaligwa	0,0	4,5	0,0	0,0	23,3	11,1	1,5	0,0	4,0
Mkhondo	20,0	9,1	0,0	0,0	14,0	0,0	1,8	1,2	3,0
Dr Pixley Ka Isaka Seme	0,0	0,0	0,0	0,0	4,7	0,0	1,5	0,0	1,0
Lekwa	0,0	4,5	0,0	15,4	7,0	0,0	1,5	1,2	2,0
Dipaleseng	0,0	0,0	0,0	0,0	2,3	5,6	4,4	0,0	3,0
Govan Mbeki	40,0	22,7	0,0	30,8	9,3	16,7	10,7	8,5	12,0
Victor Khanye	0,0	0,0	50,0	0,0	4,7	0,0	1,8	0,0	2,0
Emalahleni	0,0	18,2	0,0	7,7	16,3	0,0	4,8	8,5	7,0
Steve Tshwete	0,0	4,5	0,0	7,7	4,7	5,6	4,4	13,4	6,0
Emakhazeni	0,0	0,0	0,0	0,0	0,0	0,0	0,4	1,2	0,0
Thembisile	20,0	4,5	50,0	7,7	0,0	16,7	29,2	18,3	22,0
Dr JS Moroka	0,0	0,0	0,0	7,7	0,0	22,2	9,2	13,4	9,0
Thaba Chweu	0,0	0,0	0,0	0,0	0,0	0,0	1,1	1,2	1,0
Bushbuckridge	0,0	22,7	0,0	0,0	0,0	5,6	7,0	14,6	8,0
Nkomazi	0,0	0,0	0,0	7,7	2,3	5,6	7,7	6,1	6,0
City of Mbombela	0,0	4,5	0,0	7,7	2,3	11,1	6,6	4,9	6,0
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Hotspot analysis, also called Getis-Ord Gi*, looks at each feature in the dataset and selects the ones that are closer to each other. It gives spatial information on high- or low-clustered values. There may be a high value in the dataset but statistically it may not significantly represent a hotspot. In order to be significant, a feature with a high value should be surrounded by other features with high values. Getis-Ord Gi* is used to determine whether clusters of high values (hot spots) or low values (cold spots) exist in an area. Its aim is to determine if the spatial patterns shown in Figure 9 are statistically significant or whether they resulted from random processes. If the hot spot or cold spot shows a high/low value and/or is surrounded by other features with high/low values, then the variables are statistically significant. The statistically significant clustering of municipalities that showed significant out-migration from Mpumalanga were identified by using the hot-spot analysis. This confirms a statistically significant spatial clustering of municipalities sending high numbers of migrants from Mpumalanga to Gauteng.

The hot-spot analysis of out-migration from Mpumalanga municipalities indicates areas with a spatially significant clustering of sending migrants from the Mpumalanga municipalities (Figure 9). The most significant hot spots (99% confidence) for out-migration from Mpumalanga municipalities were Thembisile (99% confidence), Steve Tshwete (95% confidence) and Victor Khanye (95% confidence). These municipalities fall under the Nkangala District Municipality, which is situated next to Gauteng, North West and Limpopo. It is quite easy for people staying in these municipalities to relocate to nearby provinces.

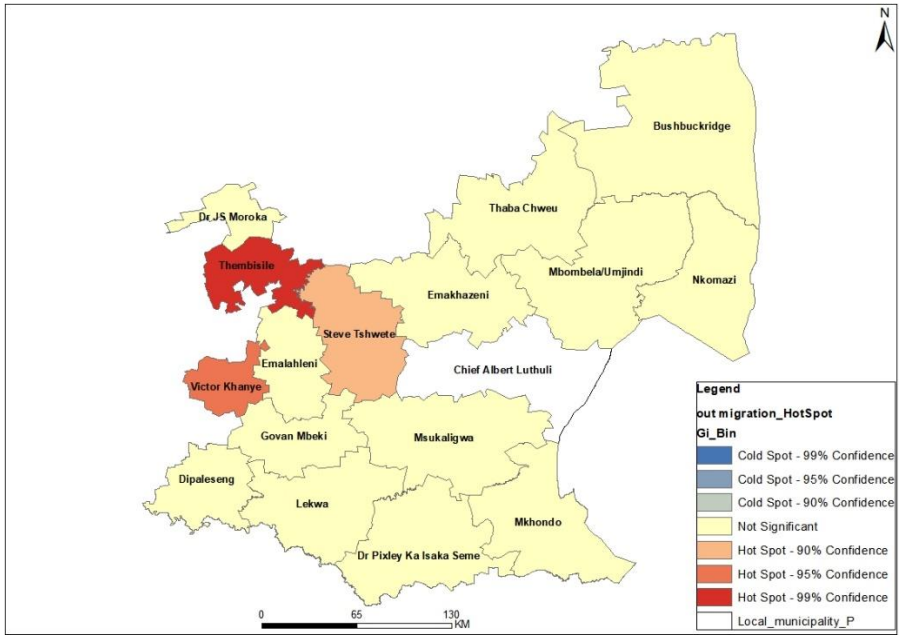

Figure 9: Main senders of out-migrants from Mpumalanga – Hot-spot analysis

The results of the cluster-outlier analysis portrayed in Figure 10 show two statistically significant patterns. The first one is the clustering of municipalities with high levels of out-migration in Nkangala (high-high clusters). Emakhazeni recorded low-high levels of out-migration, and all the other areas are not significant. These spatial clustering patterns indicate statistical significance by defining the fundamental elements of migration and analysis of migration patterns which have not only resulted from random processes.

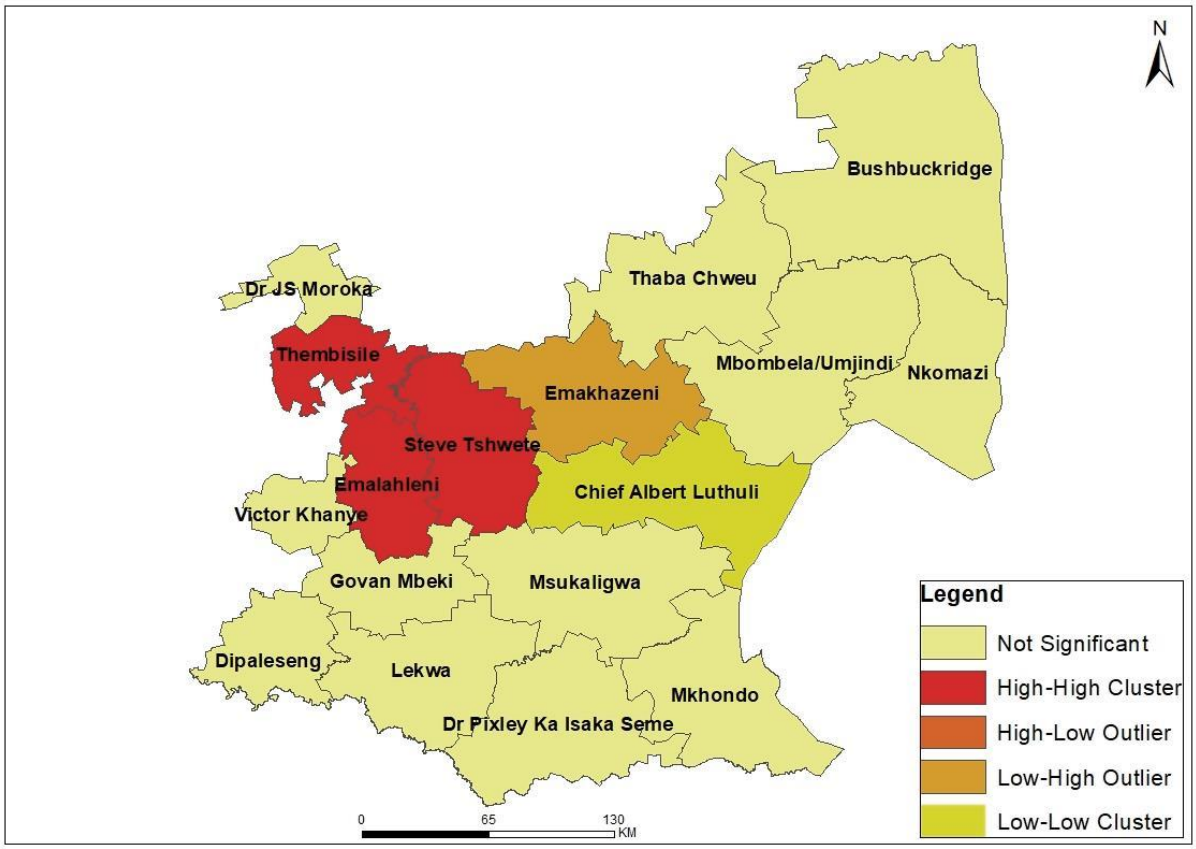

Figure 10: Distribution of main senders of out-migrants from Mpumalanga – cluster outlier analysis

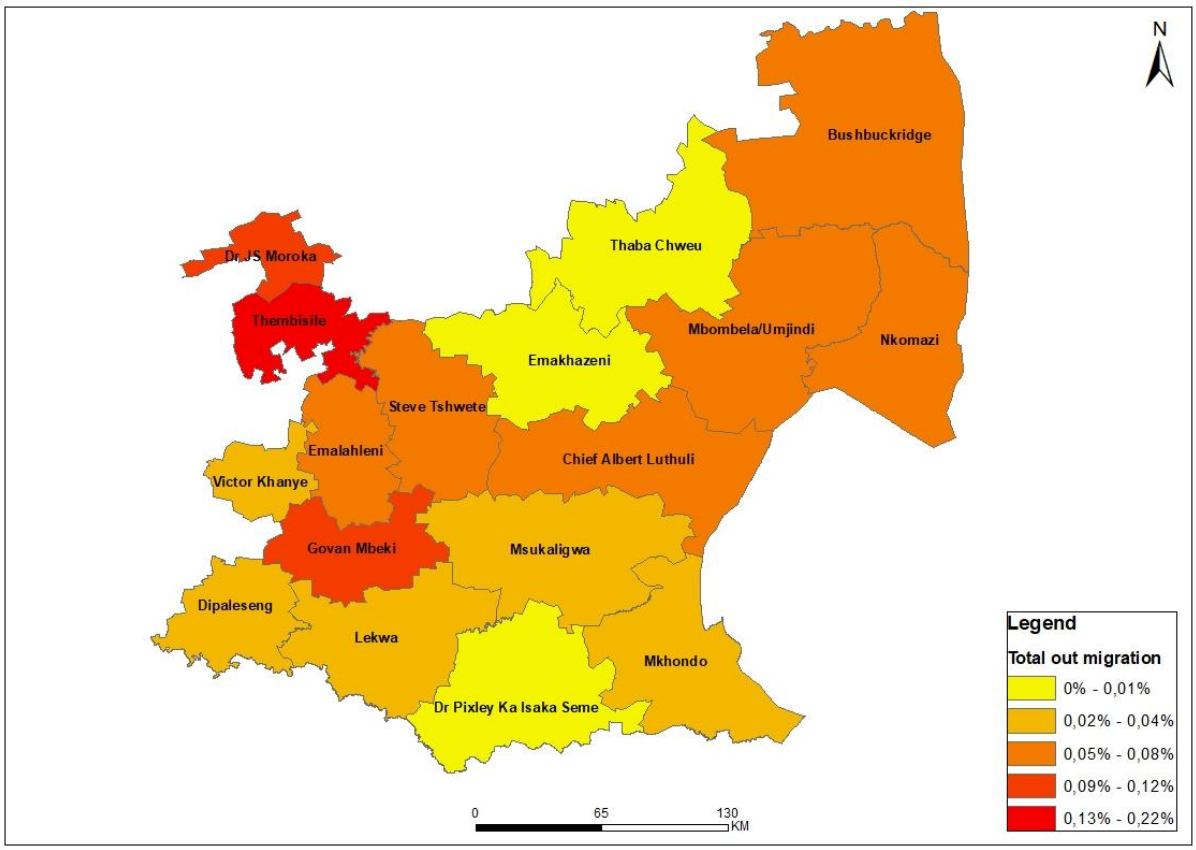

Figure 11: Main senders of out-migrants from Mpumalanga municipalities

4.3 Socio-economic characteristics

4.3.1 Gender distribution in migration

Table 4.6 shows the percentage of female and male migrants in 2011 and 2016. The proportion of male and female migrants is derived from both Census 2011 data and CS 2016 data for Mpumalanga. The most significant figures relate to migrants coming from outside the country, where the percentage of the male in-migrants was more than that of the females in 2011. The percentage change for both genders shows a decline of migrants to Gauteng, Eastern Cape and those coming from outside South Africa.

Table 4.6: Distribution of in-migration by gender

	2011		2016		% change	
Province	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Western Cape	11,45	12,30	9,1	9,0	-20,52	-26,83
Eastern Cape	11,48	12,59	15,0	15,4	30,66	22,32
Northern Cape	1,99	2,04	2,7	2,6	35,68	27,45
Free State	4,25	4,40	6,3	6,5	48,24	47,73
KwaZulu-Natal	12,98	13,87	21,1	22,0	62,56	58,62

North West	5,47	5,32	8,2	7,9	49,91	48,50
Gauteng	31,02	31,48	24,3	22,5	-21,66	-28,53
Limpopo	8,96	9,18	12,8	13,6	42,86	48,15
Outside South Africa	12,40	8,82	0,5	0,5	-95,97	-94,33

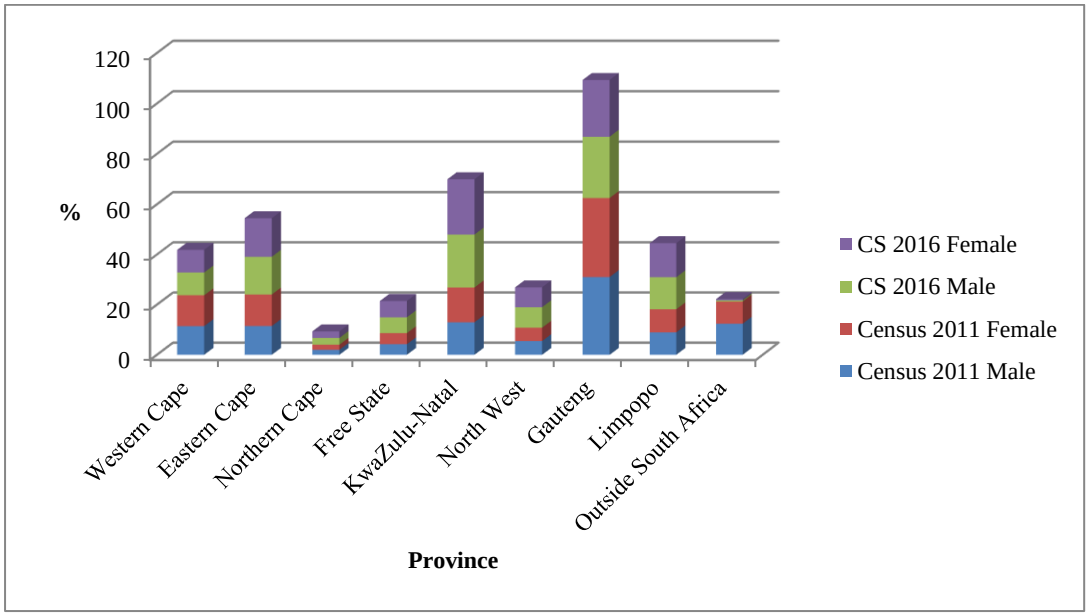

Figure 12: In-migration by gender

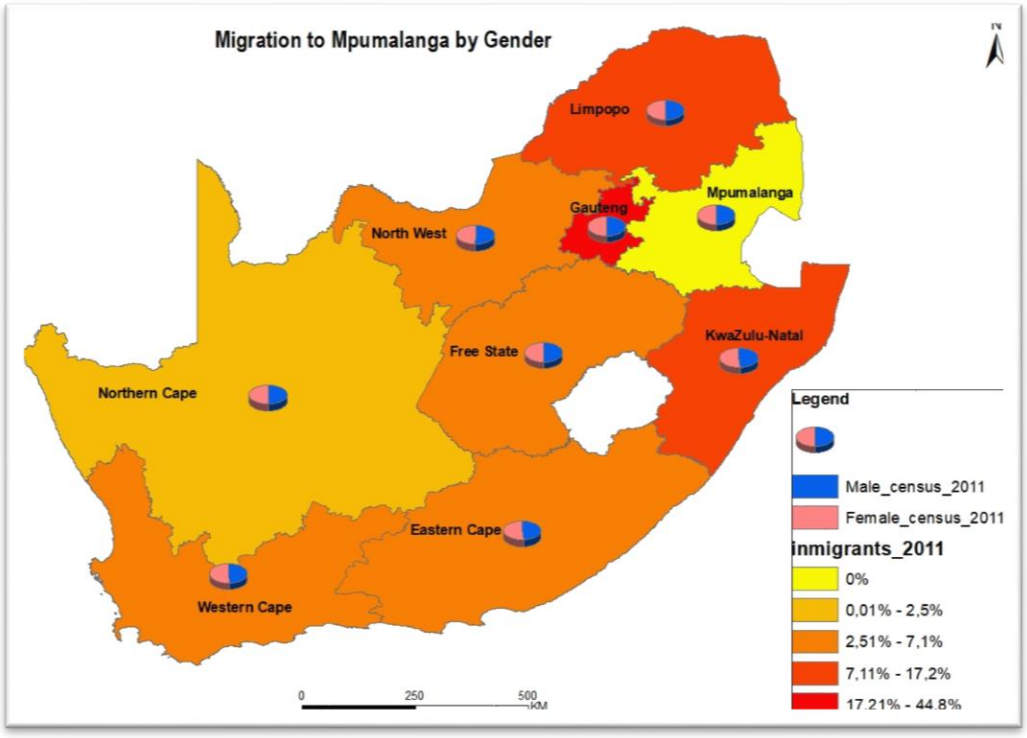

Figure 13: In-migration by gender

Table 4.7 shows the percentage of male and female out-migration in 2011 and 2016. The proportion of males and females are similar for Census out-migration data for Mpumalanga. There are some areas to where women relocate more than men and vice versa.

The majority of people relocated to Gauteng (41,6% males and 41,4% females), followed by Western Cape (15,0% males and 15,2% females) and KwaZulu-Natal (13,0% males and 13,8% females) in 2011.

In 2016, 27% of males and 23,9% females relocated to Gauteng. More females (14,1%) as compared to 12,9% males relocated to KwaZulu-Natal the same year. The same patterns also occurred in Eastern Cape, where the percentage of women was 17,8 % and that of men was 15,5% in 2016. Northern Cape recorded the lowest out-migration rate for both women and men in 2011 and 2016. In 2017, the proportion of out-migration for females and males is not that different.

The percentage change shows a decline in the number of males relocating to Western Cape, KwaZulu-Natal and Gauteng, while there is a decline in the number of women relocating to Western Cape, Gauteng and outside the country.

Table 4.7: Distribution of out-migration by gender

Province	Census 2011		CS 2016		% change	
	Male	Female	Male	Female	Male	Female
Western Cape	15,0	15,2	7,3	7,1	-51,33	-53,29
Eastern Cape	7,6	8,3	15,5	17,8	103,95	114,46
Northern Cape	1,5	1,5	2,4	2,4	60,00	60,00
Free State	3,1	3,0	4,4	4,6	41,94	53,33
KwaZulu-Natal	13,0	13,8	12,9	14,1	-0,77	2,17
North West	4,4	3,8	7,7	7,4	75,00	94,74
Gauteng	41,6	41,4	27,0	23,9	-35,10	-42,27
Limpopo	4,0	3,7	16,5	17,5	312,50	372,97
Outside South Africa	6,2	6,3	6,3	5,2	1,61	-17,46

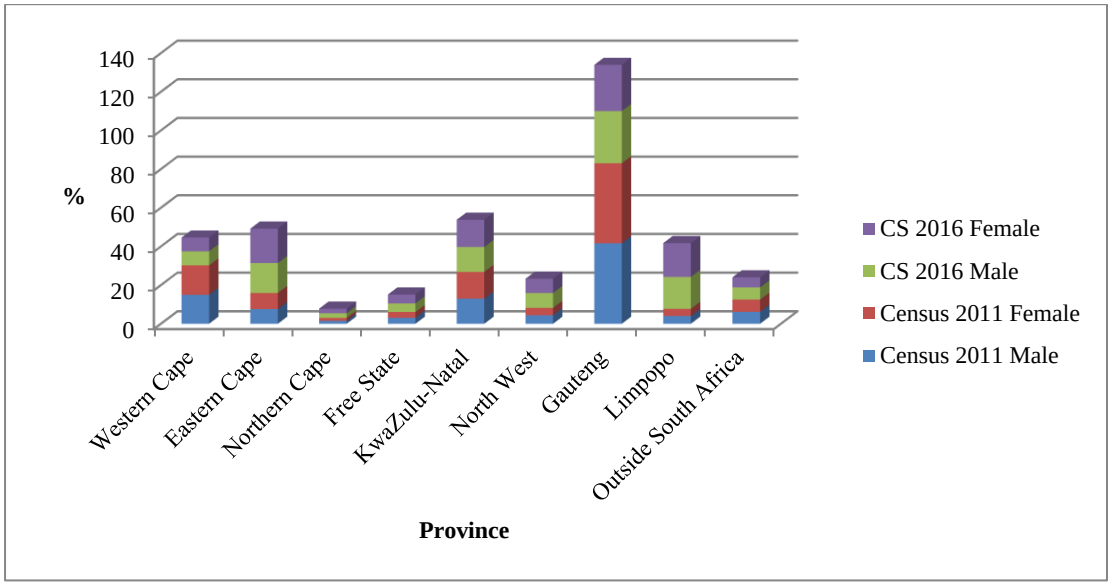

Figure 14: Out-migration by gender

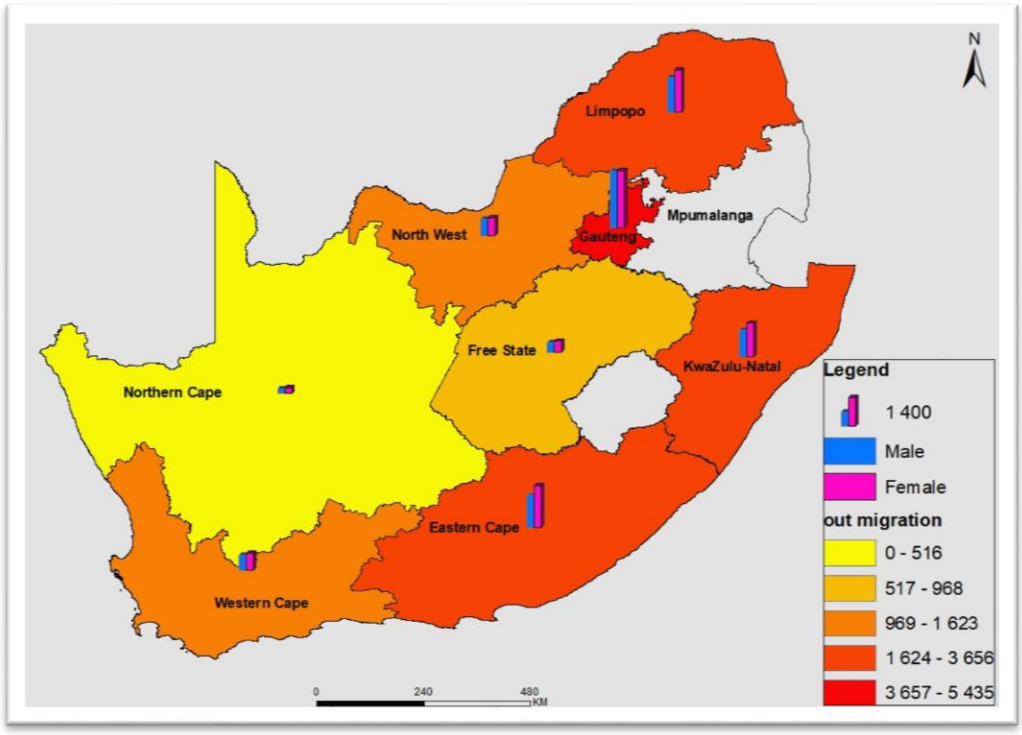

Figure 15: Out-migration by gender

4.3.2 Population group in-migration

Table 4.8 shows the main sender provinces of migrants to Mpumalanga. In 2011, the majority of black people (34,2%) who migrated to Mpumalanga came from Gauteng, 58% were coming from Western Cape, and 45,6% of whites coming from Gauteng, Few Indians relocated to Mpumalanga. The pattern repeats itself for 2016, where 29,3% of blacks came from Gauteng, 53,1% of coloured people came from Western Cape, 42,6% of whites came Gauteng, and the majority of Indians/Asians (42,6%) came from KwaZulu-Natal.

Table 4.8: Distribution of group in-migrants by population group

Province	Census 2011				CS 2016			
	Black African	Coloured	Indian or Asian	White	Black African	Coloured	Indian or Asian	White
Western Cape	6,4	58,0	0,06	18,6	4,8	53,1	4,1	20,3
Eastern Cape	16,0	11,1	0,03	6,8	13,8	13,8	3,2	7,6
Northern Cape	1,6	8,3	0,01	1,9	1,7	13,4	1,2	3,4
Free State	5,3	1,6	0,01	5,1	6,8	2,5	1,7	6,4
KwaZulu-Natal	15,8	4,7	0,53	9,6	13,8	3,4	43,8	9,3
North West	7,1	1,4	0,02	4,8	8,6	2,0	2,8	7,1
Gauteng	34,2	14,2	0,32	45,6	29,3	10,7	29,2	42,6
Limpopo	13,6	0,7	0,02	3,3	12,0	0,6	1,0	3,3
Outside South Africa	14,1	1,1	0,15	4,3	9,2	0,5	13,0	3,4

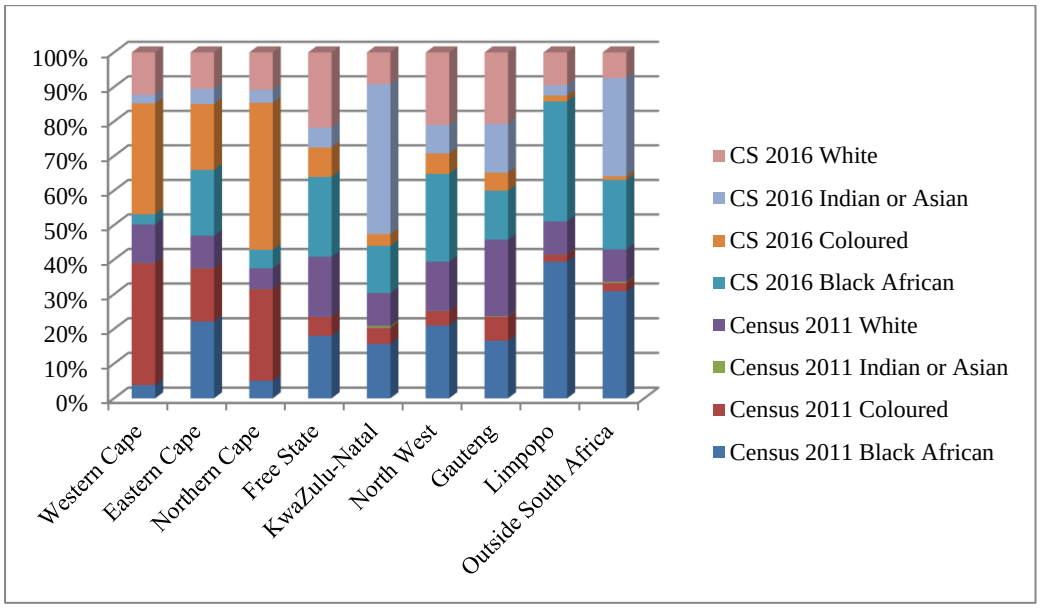

Figure 16: In-migrants by population group

4.3.3 Out-migration by population group

Table 4.9 shows the main receiver provinces of migrants from Mpumalanga. The majority of people left for Gauteng. Percentage wise, more whites and Indians left for Gauteng, followed by blacks. In 2011, 50,8% whites, 40,7% Indians and 40,5% blacks moved to Gauteng. The majority of coloured people relocated to Western Cape – 56,0% relocated to Western Cape in 2011 and 49,6% relocated to Western Cape in 2016. A small number of the Indian/Asian population moved to North West (0,3%) and Free State (0,7%) in 2016. Only a small number of people moved to other provinces and outside the country.

Table 4.9: Out-migrants by population group

	Census 2011				CS 2016			
Province	**Black African**	**Coloured**	**Indian or Asian**	**White**	**Black African**	**Coloured**	**Indian or Asian**	**White**
Western Cape	8,7	56,0	4,9	17,6	3,7	49,6	2,7	21,1
Eastern Cape	12,4	5,1	2,6	5,1	18,1	10,8	2,7	4,5
Northern Cape	1,4	4,4	0,4	1,4	1,6	15,4	1,0	3,0
Free State	3,1	1,3	0,4	4,1	4,6	2,4	0,7	6,6
KwaZulu-Natal	14,1	6,3	45,2	10,5	14,3	5,3	25,1	7,7
North West	5,3	1,5	1,5	4,2	8,0	2,6	0,3	7,4
Gauteng	40,5	22,6	40,7	50,8	24,6	11,0	61,9	39,8

Limpopo	9,1	2,0	2,7	5,0	19,3	1,3	1,0	2,3
Outside South Africa	5,3	0,8	1,7	1,4	5,9	1,6	4,7	7,6

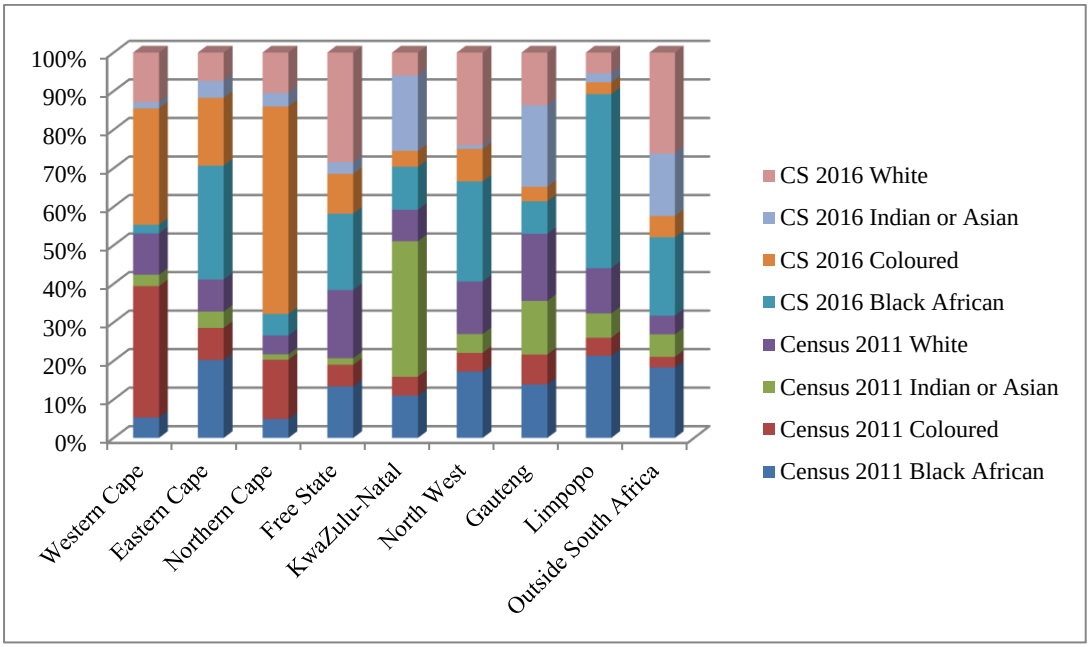

Figure 17: The distribution of population group out-migrants

4.3.4 Distribution of in- and out-migration by level of education

Table 4.10 shows the education level of migrants in 2011. The more educated people are, the more likely they are to move in and out of Mpumalanga. A total of 20,7% out-migrants from Mpumalanga have a higher diploma as their highest level of education, and 20,4% of out-migrants have an honours degree or higher qualification. A total of 20,2% of in-migrants to Mpumalanga have a higher diploma as their highest level of education, while 33,7% of in-migrants have an honours degree or higher qualification.

Table 4.10: Distribution of in- and out-migration by level of education

Level of education	**Certificate with less than Grade 12/Std 10**	**Diploma with less than Grade 12/Std 10**	**Certificate with Grade 12/Std 10**	**Diploma with Grade 12/Std 10**	**Higher Diploma**	**Post-Higher Diploma (Masters, Doctoral diploma)**	**Bachelor's degree**	**Honours and above**
Census in-migration	1,5	1,9	13,0	20,0	20,2	3,1	18,5	21,9
Census out-migration	1,2	2,7	11,6	25,9	11,7	8,9	22,2	15,8
CS in-migration	1,0	2,1	9,2	20,4	9,2	7,0	17,4	33,7

CS out-migration	1,9	2,4	13	21,4	20,7	3,3	16,9	20,4

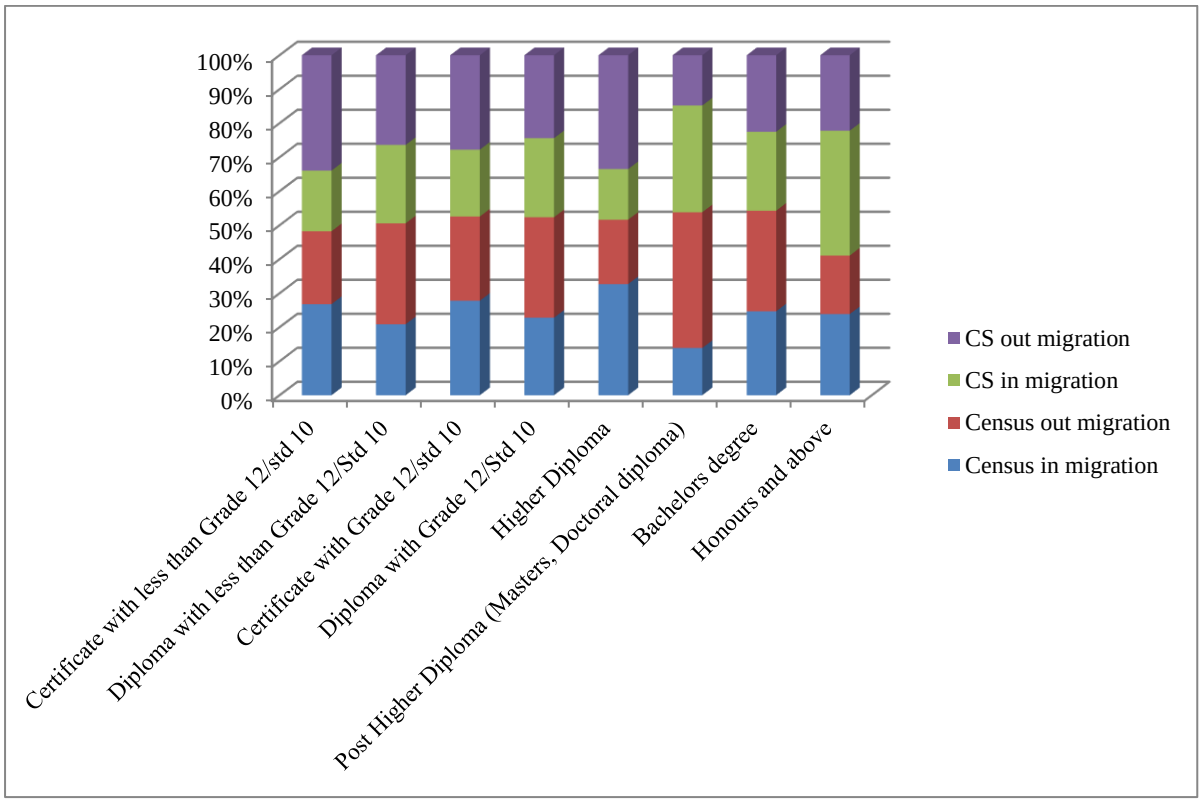

Figure 18: In- and out-migration by level of education

4.3.5 Distribution of in-migration by age

Table 4.11 shows the distribution of the ages of migrants in 2016. The ages were categorised as follows: people between 14 to 35 years were regarded as youth; 36 to 59 were classified as adults; and those aged 60 to 65 were classified as retirees. The majority of the youth preferred to relocate to Bushbuckridge (27,8%) and Albert Luthuli (21,7%). People between the ages of 36 and 59 preferred to relocate to Bushbuckridge (28,5%), Albert Luthuli (19,9%) and Emalahleni (13,5%), while the percentages for those who have retired show that 34,1% moved to Bushbuckridge, while 12,2% moved to both Albert Luthuli and Emalahleni. A clear distribution is shown in Figure 19, Figure 20 and Figure 21. The age groups 36–59 and 60–65 seem to be the ones who migrate more than the youth.

Table 4.11: Distribution of in-migration by age

Municipality	Age 14–35	Age 36–59	Age 60–65
Albert Luthuli	21,2	19,9	12,2
Msukaligwa	3,0	2,3	4,9
Mkhondo	3,1	3,5	0,0
Pixley Ka Seme	1,1	0,6	0,0
Lekwa	2,3	2,3	0,0
Dipaleseng	0,7	0,9	2,4
Govan Mbeki	3,5	5,8	4,9
Victor Khanye	1,5	0,3	0,0
Emalahleni	9,6	13,5	12,2
Steve Tshwete	2,4	2,6	2,4
Emakhazeni	0,5	0,3	2,4
Thembisile	4,6	3,5	2,4
Dr JS Moroka	2,5	2,0	7,3
Thaba Chweu	1,3	2,3	2,4
Mbombela	8,8	6,9	4,9
Nkomazi	5,9	4,9	7,3
Bushbuckridge	27,8	28,5	34,1

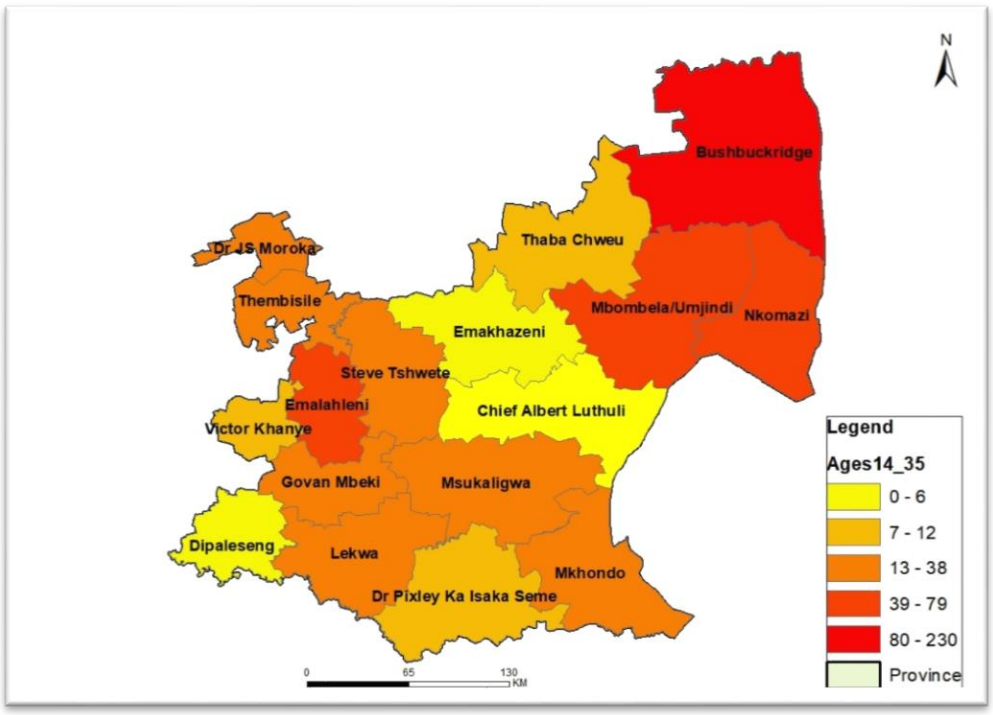

Figure 19: In-migration by age 14–35

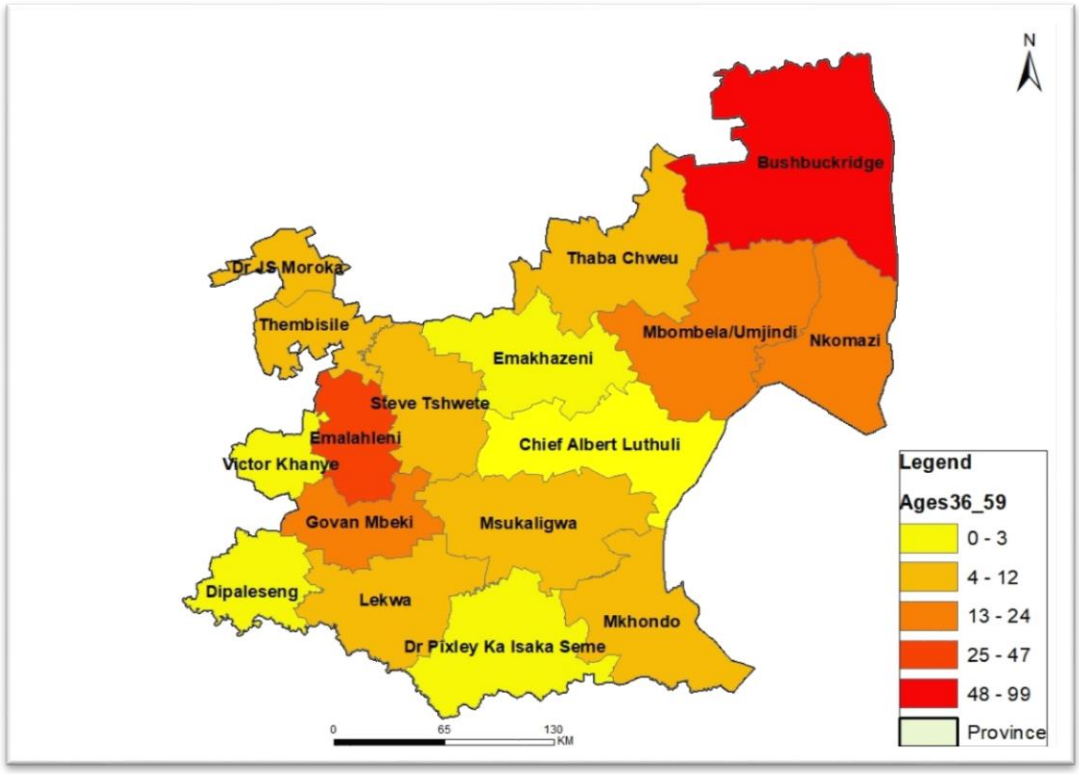

Figure 20: In-migration by age 36–59

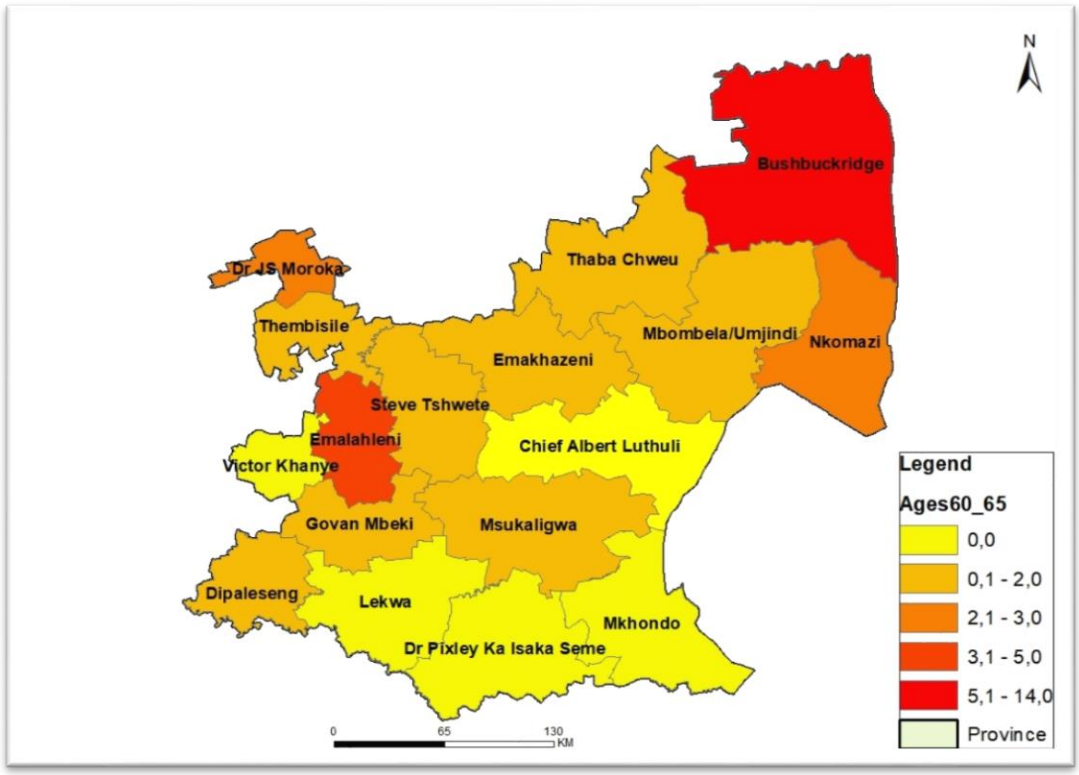

Figure 21: In-migration by age 60–65

4.3.6 Distribution of out-migration by age

Table 4.12 shows the distribution of migrants by age in 2016. The ages were categorised as follows: people between 14 to 35 years were regarded as youth; 36 to 59 were regarded as adults; and those aged 60 to 65 years were regarded as retirees. The municipalities that show more movement (greater than 10%) out of Mpumalanga are Mbombela, Nkomazi, Bushbuckridge and Emalahleni – the movement is the same in all the age groups. The municipalities that show a lesser proportion of movement (less than 3%) from Mpumalanga in all age groups are Thaba Chweu, Pixley Ka Isaka Seme and Emakhazeni.

Table 4.12: Distribution of out-migration by age

Municipality	Age 14–35	Age 36–59	Age 60–65
Albert Luthuli	4,5	4,1	5,2
Msukaligwa	3,6	3,7	3,4
Mkhondo	3,6	3,3	3,2
Pixley Ka Isaka Seme	1,8	1,9	2,3
Lekwa	2,6	3,2	2,9
Dipaleseng	1,0	1,1	1,2
Govan Mbeki	7,3	8,3	6,8
Victor Khanye	1,7	2,0	2,2
Emalahleni	10,1	11,4	9,3
Steve Tshwete	5,4	6,6	5,8
Emakhazeni	1,1	1,2	1,3
Thembisile	7,7	8,1	9,3
Dr JS Moroka	5,8	6,1	9,4
Thaba Chweu	2,4	2,8	2,5
Mbombela	17,2	16,7	14,7
Nkomazi	10,5	8,0	7,1
Bushbuckridge	13,6	11,5	13,4

4.3.7 Employment

Table 4.13 shows the numbers of migrants moving in and out of Mpumalanga in 2011 and the distribution of employment over this period. Of the people who moved from Gauteng to Mpumalanga, 30,3% moved because of employment, while the reason that 34,2% of the people left Mpumalanga to Gauteng was for employment, followed by 15,3% who came from KwaZulu-Natal to Mpumalanga and 15,1% who went from Mpumalanga to Kwazulu-Natal; while 13,7% of people came from Western Cape to Mpumalanga for reasons of employment and 14,9% left for the Western Cape for the same reason. The net migration rate calculated was zero, which means that employment is not affected by migration.

Table 4.13: Distribution of employment, Mpumalanga

Province	In-migration	Out-migration	Net migration rate
Western Cape	13,7	14,9	0,0
Eastern Cape	9,3	8,2	0,0
Northern Cape	2,1	2,1	0,0
Free State	5,4	5,2	0,0
KwaZulu-Natal	15,3	15,1	0,0
North West	5,9	6,2	0,0
Gauteng	30,3	34,2	0,0
Mpumalanga	6,8	7,1	0,0
Limpopo	7,4	6,9	0,0
Outside South Africa	3,8	0,1	0,0

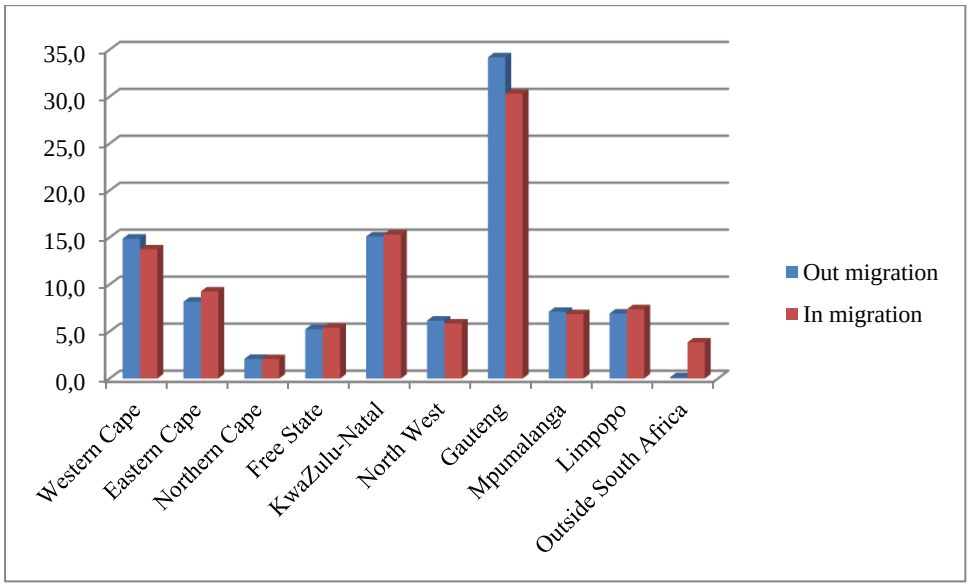

Figure 22: Distribution of employment, Mpumalanga

4.3.8 In- and out-migration by level of income

Table 4.14 shows the different incomes earned by the people who moved in to Mpumalanga in 2011. Gauteng shows a high percentage of in-migrants to Mpumalanga. There were fewer people from Northern Cape who relocated to Mpumalanga based on income category. Less than 1% of people moved to Mpumalanga for the salary of (R153 601–R307 200) and (R614 401–R1 228 800).

Table 4.14: Distribution of in-migration to Mpumalanga by income category

Province	Income category										
	R1 to R4 800	**R4 801 to R9 600**	**R9 601 to R19 200**	**R19 201 to R38 400**	**R38 401 to R76 800**	**R76 801 to R153 600**	**R153 601 to R307 200**	**R307 201 to R614 400**	**R614 401 to R1 228 800**	**R1 228 801 to R2 457 600**	**R2 457 601 or more**
Western Cape	8,9	7,3	9,3	10,2	12,5	14,5	0,1	14,7	0,1	12,8	14,2
Eastern Cape	15,1	14,4	13,6	10,7	9,7	9,1	0,1	6,0	0,0	5,6	6,2
Northern Cape	2,6	2,0	2,8	1,6	1,6	2,0	0,0	1,2	0,0	1,3	1,1
Free State	5,4	4,5	5,0	4,0	4,2	4,2	0,0	2,9	0,0	2,8	3,2
KwaZulu-Natal	15,1	13,2	12,7	11,6	12,0	13,1	0,1	11,3	0,1	11,0	10,8
North West	6,4	5,1	5,7	4,8	5,7	4,9	0,0	3,2	0,0	3,5	3,5
Gauteng	21,5	20,5	20,1	28,5	33,3	37,2	0,4	47,7	0,5	48,0	44,4
Limpopo	6,3	4,6	5,0	4,9	5,2	4,5	0,0	4,0	0,0	2,7	4,6

Table 4.15 shows the different income percentages for people who moved out of Mpumalanga in 2011. Gauteng shows a high percentage of out-migrants from Mpumalanga in high-income categories (from R19 201 upwards), whereas KwaZulu-Natal shows these tendencies in the low-income categories (less than R19 200). The majority of people who moved from Mpumalanga in order to earn higher salaries, moved to Gauteng, and those who opted for a decrease in salary moved KwaZulu-Natal.

Table 4.15: Distribution of out-migration from Mpumalanga by income category

Province	Income category										
	R1 to R4 800	**R4 801 to R9 600**	**R9 601 to R19 200**	**R19 201 to R38 400**	**R38 401 to R76 800**	**R76 801 to R153 600**	**R153 601 to R307 200**	**R307 201 to R614 400**	**R614 401 to R1 228 800**	**R1 228 801 to R2 457 600**	**R2 457 601 or more**
Western Cape	5,7	8,9	11,6	17,1	16,6	16,6	16,8	17,2	16,8	15,1	14,9
Eastern Cape	19,1	16,7	16,6	8,1	7,8	9,3	8,5	6,1	4,5	6,4	8,0
Northern Cape	2,6	2,6	3,3	2,1	2,1	2,2	2,0	1,3	1,0	1,7	1,3
Free State	7,2	8,3	7,5	5,7	5,2	5,1	4,6	3,4	2,7	3,9	4,7
KwaZulu-Natal	26,1	22,8	21,2	17,0	15,3	16,3	14,9	13,5	9,7	14,4	13,1
North West	7,7	7,5	8,1	6,6	7,9	5,9	4,7	3,5	3,0	4,4	4,3
Gauteng	13,4	20,8	18,3	36,6	38,7	37,6	41,8	50,6	59,5	49,1	47,2
Limpopo	18,3	12,4	13,6	6,8	6,3	6,9	6,7	4,4	2,7	5,1	6,4

4.4 Reasons for moving

Table 4.16 displays the reasons for moving from Mpumalanga to their current place of residence in 2016. In general, 20,1% of people who moved to their current place of residence gave as main reason for moving wanting to be closer to their spouse, followed by those who wanted an education (18,1%), those who moved to a new dwelling for the household (15,0%), those looking for paid work (13,2%), those who had a job transfer/took up new job opportunity (8,9%) and those moving as a household with a household member (for health reasons) (7,7%). Interestingly enough, this pattern can be seen across all provinces. No people moved to Western Cape, Eastern Cape, Northern Cape or Mpumalanga due to political instability/religious conflict/persecution, whereas in the remaining provinces there were few people who moved due to political instability/religious conflict/persecution. The majority of those who moved for better municipal services moved to Western Cape (7,6%). There were only a few people who moved to their current province of residence due to political instability/religious conflict/persecution.

Table 4.16: Distribution of population by reason for moving to current province

Reason for moving	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo
Divorce/separation	2,8	1,8	0,1	0,8	1,5	1,1	4,5	1,3	1,1
Education (e.g. studying; schooling; training)	8,5	21,2	9,8	13	24,7	12,4	11,8	18,1	17,0
For better municipal services	7,6	3,5	1,2	1,2	2,2	0,9	2,9	0,6	0,7
Health (e.g. poor/ill health)	1,3	3,2	0,8	2,6	1,8	3,8	2,0	3,0	2,1
High levels of crime	1,7	1,2	1,2	0,6	0,8	1,5	1,0	0,8	0,5
Job loss/retrenchment/contract ended	2,2	2,3	2,7	1,6	1,9	1,3	2,3	1,0	1,4
Job transfer/take up new job opportunity	5,7	7,3	12,5	5,8	9,7	7,3	11,3	8,9	11,6
Look for paid work	10,3	13,5	8,2	9,8	11,8	11,5	10,0	13,2	14,0
Moving as a household with a household member (for health reasons)	6,2	5,4	13,3	12,8	5,8	10,3	6,4	7,7	7,4
Moving to live with or be closer to spouse (marriage)	22,0	19,8	22,4	22,4	14,2	22,3	16,9	20,1	20,8
New dwelling for household	17,9	10,1	11,4	12,2	13,7	12,3	18,8	15,0	9,9
Other business reasons (e.g. expansion of business)	0,8	1,5	0,0	0,8	0,6	0,4	1,2	0,6	0,7
Political instability/religious conflict/persecution	0,0	0,0	0,0	0,2	0,2	0,1	0,2	0,0	0,4
Retirement	1,3	0,3	0,0	0,4	0,3	0,7	0,9	0,4	0,2
Start a business	0,1	0,4	0,0	0,4	0,3	0,3	0,5	0,6	1,0
Other	11,6	9,1	16,1	14,8	11,2	13,9	12,6	8,1	11,3
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Table 4.17 shows the reasons why migrants moved to their current place of residence in Mpumalanga, by district municipality in 2016. The total results in the province show that the largest proportion of persons who moved to their current places did so because they wanted to be closer to their spouses (21,9%), followed by a good paying job (13,1%) and better employment opportunity (12,8%). This pattern is also seen across all the municipalities in the province.

Table 4.17: Reasons for moving to Mpumalanga by district municipality

Reason for moving	Gert Sibande	Nkangala	Ehlanzeni	Mpumalanga
Divorce/separation	1,3	1,0	1,4	1,2
Education	11,2	9,7	6,5	9,1
For better municipal services	2,3	3,0	2,6	2,7
Health	1,0	1,0	1,3	1,1
High levels of crime	0,4	0,4	0,7	0,5
Job loss/retrenchment/contract ended	2,2	1,1	1,4	1,5
Job transfer/take up new job opportunity	14,9	11,9	12,9	12,8
Look for paid work	11,3	15,1	11,1	13,1
Moving as a household with a household member	8,4	8,1	6,8	7,8
Moving to live with or be closer to spouse (marriage)	22,5	18,7	26,9	21,9
New dwelling for household	0,6	0,9	1,2	0,9
Other business reasons	0,8	1,3	0,8	0,9
Political instability/religious conflict/persecution	0,2	0,2	0,3	0,2
Retirement	0,1	04	02	0,3
Start a business	0,9	0,7	0,4	0,6
Other	4,4	5,3	3,7	4,6
Total	**100,0**	**100,0**	**100,0**	**100,0**

Source: Statistics South Africa (2016)

4.5 Migration from outside South Africa to Mpumalanga

Table 4.18 shows people who were not born in South Africa but who were staying in Mpumalanga in 2016. Approximately 90,9% were born in the SADC region, followed by those who were born in the rest of Africa (4,6%) and the United Kingdom (1,4%). Those born in Asia and other countries show the lowest proportions of less than 2%. The highest proportions of those born in the SADC region are found in all districts, with proportions higher than 80%. Those born in the rest of Africa and Asia reside mostly in Gert Sibande and Nkangala municipalities (because of their manufacturing and agricultural economies).

Table 4.18: People who were not born in South Africa

District\region of birth	SADC		Rest of Africa		United Kingdom and Europe		Asia		Other		Total
	N	%	N	%	N	%	N	%	N	%	
Gert Sibande	14 468	86,4	1 148	6,9	352	2,1	650	3,9	133	0,8	**16 751**
Nkangala	33 030	87,1	2 071	5,5	1 496	3,9	1 103	2,9	208	0,5	**37 909**
Ehlanzeni	57 733	94,4	2 059	3,4	721	1,2	478	0,8	153	0,3	**61 143**
Mpumalanga	**105 231**	**90,9**	**5 278**	**4,6**	**2 569**	**2,2**	**2 231**	**1,9**	**494**	**0,4**	**115 803**

Source: Statistics South Africa (2016)

5. CONCLUSION AND RECOMMENDATIONS

5.1 Summary of main findings

The first three objectives of the study were to determine migration patterns and trends to and from Mpumalanga province for the period 2011 and 2016 and to analyse possible changes and trends that may be concealed by summing up migration data through spatial data and clustering analysis. The forth objective is to delineate the socio-economic profile of migrants to and from Mpumalanga. Of all people who migrated to Gauteng in 2011, 8,8% came from Mpumalanga; this makes up 4,4% of the Gauteng population (Statistics South Africa, 2011). Gauteng is the economic centre of the country because it attracts international migrants as well as domestic migrants from rural provinces. Gauteng receives the highest inflow of in-migrants because of better economic opportunities, jobs, and the promise of a better life. Gauteng's population has grown because of migration rather than a natural increase. The majority of people who migrated to Mpumalanga came from Gauteng, followed by Limpopo and KwaZulu-Natal, mainly because they are neighbouring provinces. The most preferred municipalities for in-migration are Emalahleni, Thembisile and Steve Tshwete municipalities, which are found in the Nkangala district. They are preferred because of their rich minerals and natural resources. These municipalities are close to Gauteng, which gives them the opportunity to a large market, agriculture and manufacturing; and this has also been confirmed by the hot-spot analysis. Those coming from outside of South Africa mostly came from the SADC region (90,9%). The results of the cluster-outlier analysis show the clustering of municipalities with high levels of out-migration as Nkangala (high-high clusters) and low-high clustering as Emakhazeni. Most adults relocated to Emalahleni municipality because of coal mining. There is no clear indication on migrating because of agricultural activities. This was possibly caused by the changes in the boundaries since some parts of Mpumalanga are now falling under Limpopo.

The last objective was to interpret migration patterns using the theory of Ravenstein's Law of Migration, which is elaborated in the table below.

Table 5.1: Ravenstein's Law of Migration

VARIABLE	Explanation
Age	It has been found from the distribution of age categories that adults travel more than youth, and this confirms Ravenstein's theory.
Level of education	The more educated people are, the more likely they are to relocate.
Employment	The majority of people from Mpumalanga are relocating to Gauteng, followed by Limpopo and KwaZulu-Natal because of development in those areas. This also supports Ravenstein's theory of migration.
Sex	The proportions of males and females are related for census out-migration of Mpumalanga. In 2011, there are some areas to which women relocated more than men did, and in other cases there were areas to which more males than females relocated. In 2016, 6,3% of males travelled outside Mpumalanga, whereas 5,5% females travelled outside the province. This confirms Ravenstein's theory, which states that more male travel longer distances.
Income category	People who earn more are found in developed provinces, such as Gauteng and KwaZulu-Natal.

5.2 Implications

The rate at which migrants flow to Mpumalanga will cause challenges in the demographic structure of their areas. There has been a loss of skills from people who relocated from Mpumalanga to other provinces in the country and also outside the country. The results have shown that people with at least matric and above are moving from the province, which will have an effect on the flow of ideas, innovation, economic growth, trade, and investments on the receiving province. On the other hand, this will also cause social and economic challenges in host countries. Working people, the brain-drain effect, and talent are being lost from Mpumalanga.

The rate at which migrants are flowing to Mpumalanga will continue to put more pressure on the infrastructure (services and social facilities) and assets of the province. Proper planning will be needed for the government to perform well.

Migrants from other provinces, and mainly foreigners, are always seen as threats to Mpumalanga citizens since they are viewed as people who are coming to the province to take employment and businesses opportunities that are meant for Mpumalanga citizens. This can result in psychosomatic stress and aggressive reactions to migrants. Mpumalanga also benefits economically from the highly skilled migrants.

The national budget and service delivery to municipalities where the number of migrants is mounting (such as Emalahleni, Thembisile and Steve Tshwete) will be affected. Migration causes pressure on the assets of small municipalities such as Emakhazeni, Mkhondo and Dr Pixley Ka Isaka Seme, who are the receiver municipalities for unemployed and low-skilled migrants. Municipalities such as Thembisile municipality and Govan Mbeki are losing skills because of the high rate of migration in those municipalities.

5.3 Limitations of the study and future research

This study gives migration trends and disparities, demographic and socio-economic physiognomies of migrants to and from Mpumalanga for the period 2011 and 2016. It also gave a spatial distribution of migrants with several socio-economic physiognomies. The outcomes are used to monitor the economic and social growth of Mpumalanga, which can help the government in planning and formulation of policy.

The unavailability of income and employment data in the Community Survey poses a great challenge for migration research. It becomes difficult to analyse census data and community survey data at lower level because there is no data for main places and at subplace level, data is only available up to municipality level. This study can further be extended by investigating the relationship between migration factors using regression analysis.

Variables such as place of birth of migrants were not available for analysis, which makes it difficult to compare the spatial temporal migration patterns. This research can also be extended by investigating how migration patterns influence policymakers, and how the strategy is developed based on the push and pull factors.

REFERENCES

Aubry A, Hillel R & Ariell R 2016. *Migration, FDI and the Margins of Trade*. New York: Mimeo, Paris: Paris School of Economics.

Bosworth G 2006. Counterurbanisation and job creation: Entrepreneurial in-migration and rural economic development. Centre for Rural Economy, Discussion Paper 4. Newcastle upon Tyne: Newcastle University.

Bosworth G 2010. Commercial counterurbanisation: An emerging force in rural economic development. *Environment and Planning* 42: 966–981.

Bosworth G & Atterton J 2012. Entrepreneurial in migration and neoendogenous rural development. *Rural Sociology* 77: 254–279.

Brown L A & Moore E G 1970. The intra-urban migration process: A perspective, Geografiska Annaler, Series B, 52, 1-13; *Yearbook of the General Systems Society* 15:109-122.

Brueckner J & Somik V 2014. *Cities in Developing Countries*: Fueled by Rural-Urban Migration, Lacking in Tenure Security, and Short of Affordable Housing. Washington DC: Brookins Institution.

Carrington B 2013. The critical sociology of race and sport: The first fifty years. *Annual Review of Sociology* 39: 379–398.

Causes and effect of human migration [online]. Available from www.khanacademy.org/humnities/wotl-history/medieval-times/migration/a/migration-focus-block. [Accessed 14 June 2018.]

DaVanzo J S 1981. Repeat migration, information costs and location specific capital. *Population and Environment* 4: 45-73.

De Haas H & Plug R 2006. Cherishing the Goose with the Golden Eggs: Trends in Migrant Remittances from Europe to Morocco 1970-2004. *International Migration Review* 40: 603-634.

Gamlen A 2006. Diaspora Engagement Policies: What Are They, and What Kinds of States Use Them? Working Paper WP-06-32; Oxford: Center on Migration, Policy and Society.

Geyer HS 1990. Implications of differential urbanisation on deconcentration in the Pretoria-Witwatersrand-Vaal Triangle metropolitan area (PWV) South Africa. *Geoforum* 21:385–396.

Geyer HS 1996. Expanding the theoretical foundation of differential urbanization. *Tijdschrift voor Economische en Sociale Geografie* 87: 44-59.

Geyer HS & Kontuly TM 1993. *A theoretical foundation for the concept of differential urbanization*. In N. Hansen, K. J. Button, & P. Nijkamp (Eds.) Regional policy and regional integration of modern classics in regional science (pp. 219–228).Cheltenham: Edward Elgar.

Geyer HS 2002. *The fundamentals of urban space*. In H. S. Geyer (Ed.), International handbook of urban systems: Studies of urbanization and migration in advanced and developing countries (pp. 3–18).Edward Elgar: Aldershot, Hants.

Geyer HS 2003. Differential urbanisation in South Africa – A further exploration. *Tijdschrift voor Economische en Sociale Geografie* 94: 89–99.

Geyer HS Jr & Geyer HS 2014. Disaggregated population migration trends in South Africa between 1996 and 2011: *A differential urbanisation approach*. Urban Forum 26: 1–13.

Geyer HS Jr & Geyer HS 2015. Polarisation reversal in South Africa: how widespread is the trend? *South African Geographical Journal* 98: 289–307.

Geyer Jr HS & Geyer, H. S. 2017. Counterurbanisation: South Africa in wider context. *Environment and Planning A* 49: 1575–1593.

Goldin I, Geoffrey C & Meera B 2011. *Exceptional People: How Migration Shaped Our World and Will Define Our Future*. Princeton: Princeton University Press.

Gurak DT & Cases F 1992. *Migration Networks and the Shaping of Migration Systems*, in M. M. Kritz, et al (Eds), International Migration Systems: A Global Approach, Clarendon Press, Oxford: 150–176.

Halfacree K 1997. Contrasting roles for the post-productivist countryside: a post-modern perspective on counterurbanisation. In: Cloke P and Little J (eds) Contested Countryside Cultures: *Rurality and Socio-Cultural Marginalisation*. London: Routledge, 70–93.

Harris J & Todaro M 1970. Migration, unemployment and development: A two-sector analysis. *American Economic Review* 60: 126 –142.

Hart T 1983. Transport and economic development: The historical dimension. In: Button KJ and Gillingwater D (eds) Transport Location and Spatial Policy. Aldershot: Gower, pp. 12–22. Henderson V (2002) Urbanization in developing countries. The World Bank Research Observer 17: 89–112.

Henderson V 2002. Urbanization in developing countries. *The World Bank Research Observer* 17: 89–112.

Hiday VA 1978. Migration, urbanization, and fertility in the Philippines, *International Migration Review* 12: 370–385.

Hirschman AO 1958. *The Strategy of Economic Development*. New Haven: Yale University Press.

Hugo GJ 1981. Village-community ties, village norms and ethnic and social networks: a review of evidence from the Third World', in De Jong, G.F. and Gardner, R.W. (eds) Migration Decision Making; Multidisciplinary Approaches to Microlevel Studies in Developed and Developing Countries. *New York: Pergamon Press*: 187–218.

Jerome H 1926. Migration and business cycles. New York: National Bureau of Economic Research, Inc.

Kontuly T & Geyer HS 2003. Lessons learned from testing the differential urbanisation model. *Tijdschrift voor Economische en Sociale Geographie* 94:124–128.

Kugler M, Oren L & Hillel 2017. Migration and Cross-Border Financial Flows. Policy Research Working Papers 8034; Washington: The World Bank.

Ledent J & Courgeau D 1982. Migration and Settlement: 15. France. Research Report RR-82-28, International Institute for Applied Systems Analysis, Laxenburg, Austria.

Lee ES 1966. A theory of migration. *Demography* 3:47-57.

Lewis AW 1954. Economic Development with Unlimited Supplies of Labor. *The Manchester School*. 22: 139–91.

Lipton M 1976. *Why Poor People Stay Poor: Urban Bias and World Development*. London: Temple-Smith.

Loffler R & Steinicke E 2006. Counterurbanisation and its socioeconomic effects in high mountain areas of the Sierra Nevada (California/Nevada). *Mountain Research and Development* 6: 64–71.

Lowry IS 1966. *Migration and Metropolitan Growth: Two Analytic Models*. San Francisco, Chandler.

Lucas RE 1990. Why doesn't capital flow from rich to poor countries? *The American Economic Review* 80: 92–96.

Martin R 2013. *The Price of Rights: Regulating International Labor Migration*. Princeton, NJ: Princeton University Press.

Massey DS 1990. Social structure, household strategies, and the cumulative causation of migration. *Population Index* 56:3-26.

McGrew J & Monroe C 2009. *An Introduction to Statistical Problem Solving in Geography Waveland*. Illinois: Long Grove. Migration trends [online]. Available from www.bbc.co.uk/schools/gcsebitesize/geography/migration/migration_trends_rev1.shtml .[Accessed 14 June 2018].

Migration of people into Gauteng 2016 [Online] available from: https://www.southafricanmi.com. [Accessed 14 August 2018].

Migration trends [online] Available from www.bbc.co.uk/schools/gcsebitesize/geography/migration/migration_trends_rev1.shtml .[Accessed 14 June 2018].

Mining industry in Mpumalanga [online]. Available from www.hotelprolet.eu/Sep/16-30308-Mining-Industr-In-Mpumalanga/. [Accessed 14 June 2018].

Mincer J 1978. Family migration decisions. The Journal of Political Economy 86:749-773.

Mitchell CJA & Madden M 2014. Revisiting commercial counterurbanisation: Evidence from rural Nova Scotia. *Journal of Rural Studies* 36: 137–148.

Morawska E 1990. The Sociology and Historiography of Immigration, in Virginia Yans-McLaughlin (ed.), Immigration Reconsidered: History, Sociology and Politics. *New York: Oxford University Press* 342: 187-240.

Mpumalanga travel [online]. Available from www.lonelyplanet.com/south-frica/mpumalanga. [Accessed 14 June 2018].

Mpumalanga- South Africa info [online]. Available from www.south-africa-info.co.za/country/province/6/mpumalanga. [Accessed 13 June 2018].

Municipalities of South Africa, 2018 [online]. Available from https://municipalities.co.za/provinces/view/6/mpumalanga. [Accessed 14 June 2018].

Myrdal G 1957. *Economic Theory and Under-Developed Regions*. London: Duckworth.

Nijkamp P, Masood G and Piet R 2011. Migrants and international economic linkages: A meta—overview. *Spatial Economic Analysis* 6: 359–76.

Pacione M 2007. *Urban geography*. A global perspective. 3rd ed. Routledge, Taylor & Francis Group. London and New York.

Pacione M 2009. *Urban geography.* A global perspective. 3rd ed. London and New York.

Petras, Elizabeth M. 1981. "The Global Labour Market in the Modern World Economy, in Mary M. Kritz, Charles B. Keely, and Silvano M. Tomasi (eds.), Global Trends in Migration: Theory and Research on International Population Movements. Staten Island, N.Y.: *Centre for Migration Studies* 433: 44-63.

Piore M J 1979. *Migrant labor and industrial societies*: Cambridge University Press.

Portes A & John W 1981. *Labour, Class, and the International System*. New York: Academic Press.

Portes A 1999. Towards a new world: the origin and effects of transnational activities. *Ethnic and Racial Studies*. 22: 463–77.

Ranis G & Fei JC 1961. A Theory of Economic Development. *The American Economic Review* 51:533-565.

Ravenstein EG 1889. The laws of migration. *Journal of the Royal Statistical Society* 52:214-301.

Ravenstein EG 1885. The Laws of Migration. *Journal of the Statistical Society of London* 48: 167-235.

Richardson HW 1973. *Regional Growth Theory*. New York: John Wiley.

Richardson HW 1980. Polarisation reversal in developing countries. *Papers of the Regional Science Association* 45: 67–85.

Sassen S 1988. *The Mobility of Capital and Labor*. A Study in International Investment and Labor Flow. Cambridge: Cambridge University Press.

Sassen S 1991. *The Global City*: New York, London, Tokyo. Princeton: Princeton University Press.

Sjaastad L 1962. The costs and returns of human migration. *Journal of Political Economy* 70: 80–93.

Skeldon R 1977. The evolution of migration patterns during urbanization in Peru. *Geographical Review* 67:394–411.

South African Local Government Association (SALGA): Mpumalanga [online]. Available from www.salga.org.za/Municipalities%20MCD%20Mpumalanga.html. [Accessed 14 June 2018].

Stark O & Bloom DE 1985. The new economics of labor migration. *American Economic Review*. 75:173–178.

Stark O 1991. *The Migration of Labour*. Cambridge: Basil Blackwell.

Statistics South Africa 2016. *Census 2011*. Pretoria: Statistics South Africa.

Statistics South Africa 2001. *Census 2001 10% sample metadata*. Pretoria: Statistics South Africa.

Statistics South Africa 2016. *Community survey 2016 metadata*. Pretoria: Statistics South Africa.

Statistics South Africa 2016. *Community survey 2016*. Pretoria: Statistics South Africa.

Stavridis J 2016. Nikkei Asian Review. [online]. Available from https://int.search.myway.com/search/GGmain.jhtml. [Accessed 14 June 2018].

Stiglitz J 1974. Wage Determination and Unemployment in LDCs. *Quarterly Journal of Economics* 88:194-227.

South African Local Government Association (SALGA): Mpumalanga [online]. Available from www.salga.org.za/Municipalities%20MCD%20Mpumalanga.html. [Accessed 14 June 2018].

Spencer D 1995. Counterurbanisation: The local dimension. *Geoforum* 26: 153–173.

Stouffer SA 1940. Intervening Opportunities: A Theory Relating to Mobility and Distance. American Sociological Review. *American Sociological Association* 5: 845–867.

Taylor JE 1986. Differential migration, networks, information and risk, in Stark, O. (ed.) Research in Human Capital and Development, Migration, Human Capital, and Development. Greenwich. *Connecticut: JAI Press* 4:147–711.

Todaro M 1969. A Model of Labor Migration and Urban Unemployment in Less Developed Countries. *American Economic Review* 59: 138-148.

Todaro MP 1976. Urban job expansion induced migration and rising unemployment. Formulation and simplified empirical test of LDCS. *Journal of Development Economics* 3: 211-225.

Todaro M 1980. *Internal migration in developing countries: A survey*. University of Chicago Press.

Todaro MP 1982. *Economics for a Developing World*. Harlow: Longman.

United Nations Development Programme (UNDP) 2009. *Overcoming Barriers: Human Barriers and Development, Human Development Report*. New York: UNDP.

Wagner FE & Ward J O 1980. Urbanization and migration in Brazil. *American Journal of Economics and Sociology* 39: 249–259.

Wallerstein I 1974: *The Modern World System: Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century*. Academic Press, New York.

Wolpert J 1965. *Behavioural Aspects of the Decision to Migrate*. Papers of the Regional Science Association 15: 159-169.

Zelinsky W 1971. The hypothesis of the mobility transition. *Geographical Review*, 61: 219–249.

Zipf G 1946. The [P(1)P(2)/D] hypothesis; on the intercity movement of persons. *American Sociological Review*, 11: 677–686.

Zolberg AR 2006. *A Nation by Design: Immigration Policy in the Fashioning of America*. New York: Russell Sage Foundation and Boston, Harvard University Press.